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Exploring Cultural Intelligence's influence on performance of multicultural teams within a Vietnamese empirical setting.

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Summary

RELEVANCE. Increasing globalization at the workplace leads to the frequent use of multicultural teams. Thus, over the last century, a vast number of researchers have been looking for ways to enhance team performance in general and multicultural team's performance in particular. Despite that, there have been a substantial number of studies dedicated to investigating of the influences of cultural diversity and Cultural Intelligence (CQ) on team performance in multinational corporations (MNCs), focusing on the context of developed business environment such as the USA and small markets have so far been ignored. Thus, the scope of this study is limited to the multinational corporations in the Vietnamese empirical context.

GOAL. The goal of this thesis is to shed light on the impact of cultural diversity and Cultural Intelligence on performance of multicultural teams (MCTs) in MNCs in Vietnam. Furthermore, this thesis also investigates the role of CQ as a moderator of the relationship between cultural diversity and team performance.

RESULTS. The empirical results are in this thesis gathered by use of online survey, which is a popular methodological trend in qualitative research. The survey is in English and back-to-back translated in Vietnamese. Some findings found are in accordance with previous studies. In contrast, some results show different interesting patterns experienced in practice by respondents in the Vietnamese setting. Firstly, we tested the relationship between cultural diversity and team performance. In line with our expectations, we found that cultural diversity has a negative effect on team performance. However, CQ was found to have no significant moderating effect on this relationship. Moreover, results indicated that CQ positively impacts MCTs' performance. And finally, this thesis also found that nationality, gender and business experience also impact team performance in the Vietnamese empirical setting

CONTRIBUTION. We hope this study can contribute to the under-researched area of the relationship between cultural diversity, CQ and team performance in MNCs in Vietnam. It will be not only a potential support for future researches, but also an assistance to managers in MNCs to enhance the MCTs' performance.

Keywords: Cultural Intelligence, cultural diversity, team performance, multicultural team (MCT), multinational corporation (MNC), Vietnamese setting.

1. Introduction

1.1 Introduction

Today, rapid advances in technology and communication have created a global economy (Friedman and Wyman 2006). As a result, companies have more opportunities to enter foreign markets, especially markets within developing countries with high potential of lower cost labor forces and valuable natural resources. However, this trend causes many organizations and individuals to face challenges of cultural diversity at work (Earley, Ang and Tan 2006). It is increasingly important to better grasp the underlying reasons why certain individuals function more effectively than others in multicultural teams. To satisfy this need, Earley and Ang (2003, 59) first developed the concept of Cultural Intelligence (CQ), which is defined as “a person’s capability to adapt to new cultural contexts” with a positive connection to team performance (Chen, Lin and Sawangpattanakul 2011; Duff, Tahbaz and Chan 2012). With a Vietnamese nationality and background, having witnessed a big boom in the Vietnamese economy in this globalization period, we hope to contribute to exploring the link between CQ and performance in multicultural teams of organisations in the Vietnamese context.

According to the authors’ systematic literature review of scientific publications, there are nine empirical articles on the influence of CQ on performance of MCTs. A summary of the main hypotheses and results of current studies are presented in Appendix A. Although a great number of research projects on Cultural Intelligence have been conducted until now, we have found that those studies focus on such contexts as the USA (Groves and Feyerherm 2011; Macnab and Worthley 2012; Chen and Lin 2013), China (Bücker et al. 2014), Taiwan (Lee and Sukoco 2010; Chen and Lin 2013), Australia (Macnab and Worthley 2012), Korea (Moon 2013), New Zealand (Ward, Wilson and Fischer 2011; Fischer 2011), Canada (Duff, Tahbaz and Chan 2012; Adair, Hideg and Spence 2013) etc.; however, none have conducted in a Vietnamese setting. Thus, our thesis will concentrate on the multinational companies in the Vietnamese setting.

Research problems and contributions

Previous studies showed that culturally homogenous teams perform much better than heterogeneous teams on most of the performance measures in the short run, while culturally heterogeneous teams improved performance at a quicker rate than culturally homogeneous teams over longer periods of time (Moon 2013; Watson, Kumar and Michaelsen 1993). The main reason for the rate of change is that Cultural Intelligence (CQ) improves among members over time to buffer against the potential negative impacts of cultural diversity on team performance. Culture shock can occur as a result of an inability to grasp local customs and language, and social interactions, which is detrimental to overall performance of an MCT at first. However, with high behavioral CQ, an individual quickly knows how to adopt their verbal and nonverbal behavior to meet expectations to maintain a positive self-image, resulting in a better performance in MCTs (Chen, Lin and Sawangpattanakul 2011; Duff, Tahbaz and Chan 2012). Also, MCTs with a high level of CQ will improve performance more quickly than MCTs with lower levels of CQ as high levels of team CQ is more likely to diminish the adverse effect of cultural diversity on initial team performance (Moon 2013) and behavioral and metacognitive CQs are beneficial for the emergence of shared values (the extent to which members all together conform to a broad set of common values when engaged in team- work) in MCTs as well but the other two CQs have no influence at all in shared values (Adair, Hideg and Spence 2013).

One of the impacts of diversity on team outcomes is information-processing perspective, which is supposed to bring positive effects to team performance concerning information diversity of MCTs (Moon 2013). Jehn, Northcraft and Neale (1999, 741) claimed that while “ social category diversity positively influenced group member morale, value diversity decreased satisfaction, intent to remain, and commitment to the group”. The CQ with higher level in team members (metacognitive, cognitive and motivational CQs) has direct and positive effects on knowledge sharing, as a result, their organizations are to benefit from successfully managing work teams in which members are from different countries with different cultural origins and complementary to each other in facilitating knowledge sharing (Chen and Lin 2013). A team with good performance also

needs cooperation and communication among members to function properly for tasks assigned. Individuals who have greater ability in adapting to situations of cultural diversity (high CQ) also tend to have open-minded and cooperative mindset and are more likely to invest effort into forming an accurate understanding of their surrounding and cognitive differences in culture to achieve their goal of adapting effectively to the intercultural situation, increasing team performance efficacy (Imai and Gelfand 2010; Lee and Sukoco 2010; Bücken et al. 2014).

Hence, in this thesis, we will contribute to the literature by investigating the 2 relationships: the impact of cultural diversity on performance of multicultural teams and the relationship of CQ and performance of multicultural teams **in the multinational corporations in the Vietnamese setting**. We specifically aim to answer the following research questions: **What is the influence of cultural diversity on performance of multicultural teams?** and **What is the influence of team members' Cultural Intelligence on performance of multicultural teams?** Especially, in this study, we will also investigate the effect of **two levels of diversity including deep-level and surface-level diversity on team performance**.

Regarding methodology, the majority of current studies focus on descriptive research designs. The particular assumed relationship between CQ and performance of MCTs is tested by using structural equation modeling in most previous studies. On one hand, structural equation modelling (SEM) is concerned with estimating (linear and non-linear) relationships between 4 factors of CQ. On the other hand, these studies used SEM methodology to test hypotheses on the relationships between MCTs' performance and CQ via the measurement model as well as relationships among 4 factor CQ variables via the structural model. Regression analysis is also conducted to explore which of the four CQ facets was driving the overall CQ effect on complementary sequences of integrative information behaviors (Imai and Gelfand 2010). According to Adair, Hideg and Spence (2013), CQ is considered as a predictor in regression equation. In practice, however, regression equations are often not fitted primarily for predicting, but for investigating which predictor or explanatory variables are needed and what their

relative importance might be (Galbraith et al. 2002). To address multicollinearity between variables, Duff, Tahbaz and Chan (2012) used the technique called “mean centering”, where the variable’s mean is subtracted from the means of all the observations (Aiken, West and Reno 1991); thus, the means of all the independent variables such as meta-cognitive, cognitive, motivational and behavioral intelligence were centred for the regression analyses to enhance the reliability of measures. We will at first consider the correlation between all independent variables to check if the multicollinearity occurs. If there is multicollinearity between variables, we will adapt the technique of “mean centering” to address this issue.

Furthermore, the hierarchical linear model (HLM) is also used to test the cross-level model in one study (Moon 2013). The main reason for using HLM is that it allows the examination of relationships across different levels by simultaneously estimating both within-person and between-person variances of the study variables (Raudenbush and Bryk 2002; Hofmann 1997). Thus, in this study, we also used HLM to test the moderating effect. In terms of data collection, most of those researches used questionnaires, online and paper surveys (Imai and Gelfand 2010; Lee and Sukoco 2010; Chen, Lin and Sawangpattanakul 2011; Groves and Feyerherm 2011; Duff, Tahbaz and Chan 2012; Adair, Hideg and Spence 2013; Chen and Lin 2013; Moon 2013; Bücken et al. 2014). For the convenience of reaching participants and for the independence of data, we will use online surveys to be distributed.

We also identified some limitations from the previous studies. Firstly, the previous studies pertain to the generalizability of findings due to the nature of student sample and unique sample. It is possible that results will not generalize to work teams in organizations because of characteristics of these kinds of sample (Lee and Sukoco 2010; Chen, Lin and Sawangpattanakul 2011; Groves and Feyerherm 2011; Duff, Tahbaz and Chan 2012; Adair, Hideg and Spence 2013; Chen and Lin 2013; Moon 2013; Bücken et al. 2014)

Second, the existence of the team in some of experiments was very short and their interaction was limited (Duff, Tahbaz and Chan 2012; Adair, Hideg and Spence 2013; Moon 2013). Third, there may be other important factors that can

potentially contribute to group performance that were not investigated and tested in these studies. In order to offer a more comprehensive finding to this topic, in this thesis, we will address all these limitations. Our studies use the sample from team member in multicultural teams in MNCs in Vietnam to increase the generalization of results, and examine performance in teams that are in existence for a longer period of time rather than using student sample. Furthermore, this study also considers multi-construct factors such as nationality, gender, and business experience as determinants of team performance.

1.2 Structure

The thesis is composed of eight main sections: introduction, literature review, theoretical framework and hypotheses, research design and methodology, data analysis, results, discussion and conclusion. In the first section, motivation, purpose of the study, background information and research questions are clearly presented. Next, the theoretical concepts used in the thesis are clarified including Cultural Intelligence, cultural diversity, multinational teams, and team performance. In chapter 3, theoretical framework and hypotheses are developed and presented to investigate the relationship between cultural diversity and team performance, and Cultural Intelligence and team performance. The fourth chapter presents the research design and methodology including data collection, level of analysis, and measures. The fifth part describes in detail every detailed step that was performed on the dataset. Section six then lists results from statistical analyses and section seven discusses, interprets and links to literature review. The thesis concludes by proposing theoretical contributions and managerial implications, limitations of thesis and suggestions for future researches.

1.3 Empirical country setting of the research

1.3.1 Vietnamese business environment

Upon opening its economy in 1986, there have been many changes in the Vietnamese business environment. For instance, Vietnam succeeded in transforming its economy from state controlled to market oriented through many policies such as price deregulation, ownership reform of state-owned enterprises, private sector development (Bhatt 2013). Vietnam has attracted investment and achieved robust growth based on its low wage rate, although there was no foreign

direct investment (FDI) in Vietnam in 1990s, according to Bhatt (2013). From 2005 to 2015, Vietnamese gross domestic product (GDP) increased steadily at the rate of 6.48% per year, reaching USD 186.2 billion in 2014 and GDP per capita grew by a respectable 4-5% per year since 2008 (World Bank 2015)

Despite the global financial crisis in 2008, Vietnam has been considered as one of the most popular investment destinations with many advantages such as low-cost skilled labor, modern infrastructure, and natural resources (Thompson 2014)

Furthermore, Vietnam's location in the Asian region is an added advantage to attract FDI in Vietnam (Bhatt 2013). Vietnam has attracted \$10-12 billion FDI annually during the last six years (Lane 2014).

After joining the World Trade Organization in 2007, Vietnam opened the market for foreign investors, goods and services through executing minimum commitments on market access and offering favorable treatment for foreign companies (Lane 2014). Furthermore, "Vietnam has made progress in implementing its bilateral and international obligations and promotes foreign investment in certain priority sectors or geographical regions. The government encourages investment in production of new materials, new energy sources, metallurgy and chemical industries, manufacturing of high-tech products, biotechnology, information technology, mechanical engineering" (Lane 2014, 10). Moreover, according to the US department of State, labor-intensive projects (using at least 5,000 full-time laborers), infrastructure projects, education, training, and health and sports development are the sectors that Vietnam wants foreign investors to invest in (Lane 2014). There is no doubt that Vietnam becomes one of the fastest growing markets in the world with the increase in the amount of FDI and the number of multinational corporations, thus, the need for cultural understanding to operate successfully in the multinational environments is quite imperative to its long-term development and sustainability.

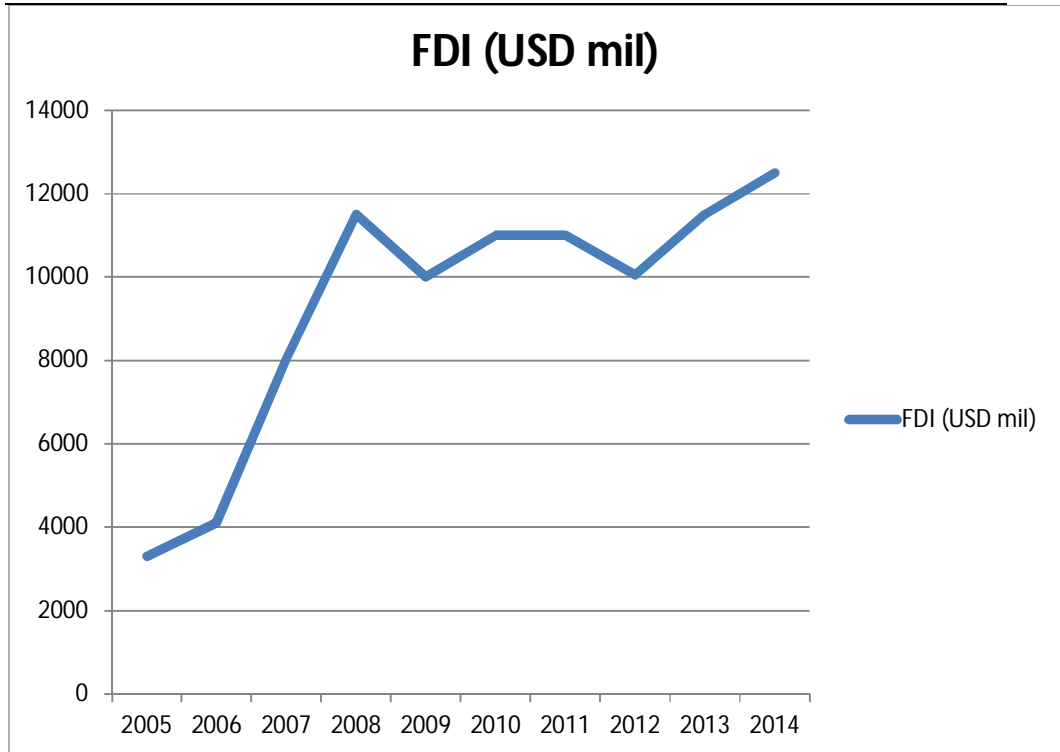


Figure 1 FDI of Vietnam, period: 2004 - 2014¹

1.3.2 Multinational Corporations in Vietnam

In recent years, many large multinational corporations (MNCs) in the world have chosen Vietnam as a potential investment destination. Most of them decided to build the combination of technology and distribution in Vietnam due to the advantage of Vietnamese position on the business global map (Nguyen 2014). Explaining this phenomenon, Mr. Stefano Cartoni, Ariston Thermo Commercial Director Asia Pacific CEO of Ariston Thermo Vietnam, said: "We see Vietnam as a potential market with a young population, the annual growth rate stood at close to double digits, the Vietnam inquisitive, hard and fast absorbing new technologies. A market with many advantages in terms of investment environment, labor, geographical location, materials such as Vietnam is an ideal choice for any business investment. " (Nguyen 2014)

In 2012, there were 1,100 new projects that had been licensed and 435 existing projects that had been approved to increase capital in Vietnam. It made the total

¹ Source: General Statistics Office of Vietnam 2015

value of the newly licensed and added capital to \$13 billion, equivalent to 84.7% of 2011. In the first quarter of 2013, Vietnam got 14,522 valid foreign invested projects with capital of \$210 billion (Nakra 2013). According to General Statistics Office of Vietnam, manufacturing and processing industry attract foreign investors most. At the end of 2013, the fact that 98 countries and territories had invested in 14,489 Vietnamese projects made the total registered investment capital reach \$213.6 billion. The largest investor in Vietnam is Korea with 588 projects licensed in 2014, equivalent to \$7,705 million (General Statistics Office of Vietnam 2015)

According to the result of a joint survey by Anphabe.com and Nielsen, conducted from October 2014 to January 2015, foreign-invested and joint stock companies are 2 main kinds of business in the list of 100 best workplaces in Vietnam in 2014. The leading in the list is Unilever, a British–Dutch multinational company specializing in consumer goods. Vinamilk, Abbott, Nestle, Procter & Gamble, Coca Cola, Pepsi, other consumer goods companies and Microsoft and IBM, software companies and the HSBC bank are in the top ten. The list also had 20 Vietnamese companies, accounting for 20% in total. While Samsung is the leading company in the electronics, technology and gadget sector, Nike was in clothing and footwear sector. The evaluation was based on 46 criteria divided in six main groups: salary, bonuses and beneficiaries; development opportunities; leadership; culture and values; job quality and life; and the company’s reputation. There is no denying about the benefits which MNCs has brought to Vietnam business environment. Thus, the question as to how to work well and cooperate between team members of a diversity group in MNCs in Vietnam is the concern of many researchers. The authors, two Vietnamese students studying International Business in Norway, believe that the outcome of the research will contribute to the improvement of team performance in MNCs in Vietnam.

2. Literature review

In this section, we review the academic literature concerning concepts and theories related to this study. Firstly, culture and diversity are generally defined and cultural diversity with its potential effects on team outcomes presented. Then, the next part examines the definition of general intelligence and Cultural

Intelligence to have clear views on kinds of intelligence. Subsequently, multicultural teams with types of teams are clearly presented in the next section. The last part discusses the concepts related to team performance which is concluded to be seen from both in individual level and group level.

2.1 Culture and Cultural diversity

Culture is defined as “the set of attitudes, values, beliefs and behaviors shared by a group of people, but different for each individual, communicated from one generation to the next” (Matsumoto 1996, 16). It coheres with the idea to regard culture as “the collective programming of the mind” (Hofstede 1991) and “a fuzzy set of basic assumptions and values, orientations to life, beliefs, policies, procedures and behavioural conventions”(Spencer-Oatey 2008, 3). Moreover, Lane et al. (2009) also defined culture as a set of a commonly held body of beliefs and values to define the “shoulds” and the “oughts” of life, which as a result guides the interaction of the group of people with each other. Therefore, culture can be existent in different levels, which can be counted as organizational units, occupational groups, industries, geographical regions, and countries (Ghemawat and Reiche 2011). With its nature of deeply affecting people’s behaviour and way of thinking within the context of multinational companies, it is the most relevant to consider country-based cultures or national cultures as well as see how it may affect the performance in a multinational group (Clancey 1997)

According to Hofstede (2011), the manifestations of culture can be concluded in four terms to cover its total concept neatly including symbols, heroes, rituals and values. In imagination, it can be compared to different skin layers of an onion with symbols being the most superficial and values being the deepest layers of culture (See Figure 2). While differences in national cultures concern mostly to the value layer, those in organizational cultures reflect the more superficial practices’ layer: rituals, heroes and symbols. (Hofstede 2011).

Symbols are defined as pictures, words, gestures or substances that “carry a particular meaning, only recognized as such by those who share the culture” (Hofstede 2011, 386) and regularly easily copied by others. Examples can be counted as a language or jargon, a product’s brand or national flags.

Rituals are supposed to be unnecessary to gain the desired goals, but highly appreciated activities in a given community (Hofstede 2011) such as the way of greeting each other and paying respects to the government officials.

Heroes are people (considered as behavior models) “alive or dead, real or imaginary” (Hofstede 2011, 387) that possess highly valued characteristics.

Values form the core layer of culture, differentiating between two contradicting poles: abnormal vs normal, evil vs good, dirty vs clean, unethical vs ethical, etc. (Hofstede 2011)

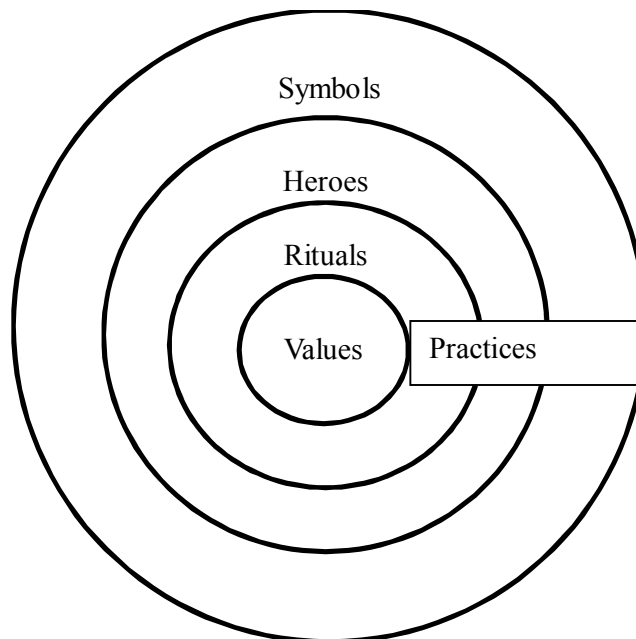


Figure 2 Layers of mental programming².

Diversity is also generally defined as “any attribute that another person may use to detect individual differences” (Williams and O’Reilly 1998, 81). According to factor approaches, Jackson, Joshi and Erhardt (2003) and Mannix and Neale (2005) identified three main types of attributes including those (1) can be readily-detected on the first interaction (e.g. gender, age, nationality and race), (2) non-visible that only become evident for a long time of communication and interactions (e.g., personality, knowledge, values), (3) fall between those two above extreme attributes (such as education and tenure). Readily-detected

² Adapted from Hofstede (2011)

attributes, known as relations-oriented diversity can affect the relationships among individuals while have no direct even no discernible effect on performance. In the meanwhile, undetectable attributes, or task-oriented diversity essential in the working environment is inclined to directly positively influence the team performance. (Pelled, Eisenhardt and Xin 1999; Jackson, Joshi and Erhardt 2003; Horwitz and Horwitz 2007).

However, multifaceted categorization scheme was used to overcome limitation of two-factor approaches above of depending on a limited set of variables. Jehn, Northcraft and Neale (1999) differentiated three kinds of diversity namely social category diversity, informational diversity, and value diversity. In that research, social category diversity mostly concerns explicit differences in members of a group in demography, such as sex, race and nationality. Informational diversity relates to diverse aspects in perspectives and knowledge bases in a work group, which may develop into differences in work experience, training and education. Lastly, value diversity refers to differences in group members in terms of their potential real mission and task.

According to Mannix and Neale (2005), diversity, including cultural diversity, affects groups in three theoretical mechanisms. Firstly, similarity-attraction theory claims that people are more inclined to be attracted by people and organisations with people who share the same beliefs, values and attitudes and avoid communicating or interacting with people different from their own opinions and views to reduce strain caused by disagreement (Rosenbaum 1986; Schneider 1987; Williams and O'Reilly 1998). In social identity and social categorization theory, people tend to categorize themselves and others into a particular group based on such demographic characteristics as age, race, gender and religion. (Williams and O'Reilly 1998). Therefore, people can behave biasedly with the out-group members while they can treat with preferences and favoritism over in-group members as well as judge people based on their group characteristics such as stereotyping (Schopler and Insko 1992; McGrath, Berdahl and Arrow 1995; Mannix and Neale 2005; Günter et al. 2010). Those two above perspectives suggest the pessimistic view of diversity in teams as people will be more attached to similarity and therefore, gain more social integration and cohesion in the

context of homogeneous teams (Mannix and Neale 2005). Information-processing theory proposes that diversity in the composition of groups may bring direct positive effects thanks to invaluable access to different knowledge, networks, information, skills, and experiences to enhance problem-solving skills, innovation and creativity (Tziner, Eden and Guion 1985; Williams and O'Reilly 1998; Mannix and Neale 2005).

Cultural diversity (also known as multiculturalism) represents a state of being different in kind, form and character due to different cultural backgrounds. The legitimacy of the concept of cultural diversity was claimed by the World Commission on Culture and Development, and soon enough was broadly embraced in the cultural policy lexicon in Europe to define the “conscious mobilization of collective cultural differences and concomitant claimed to the recognition of the cultural rights” (Isar 2006, 373)

Cultural diversity is found to influence team outcomes through those above three perspectives that adjust the relationship between diversity and teams. According to Triandis (2006), people are more inclined to share with those who come from their culture as a result of similarity-attraction theory. Race, nationality, and ethnicity are claimed to be among the most prominent social categories to classify people into different groups (Earley and Mosakowski 2000) therefore social classification of insiders and outsiders of groups can be fast and last for a long time in culturally-diverse teams. Lastly, cultural differences bring people in a team to different views, cognitive frameworks and perspectives to broaden minds owing to access to a large amount of information and ideas through information-processing theory (Hofstede 2001). The influence of cultural diversity seems to be much more exaggerated as the origin of differences is from culture.

2.2 Cultural Intelligence

General Intelligence

According to Kagan and Gall (1998), intelligence is described as the ability to find the reason, make plan, think about and solve problems or learn and understand everything based on experience and actual situations. Meanwhile, Schmidt and Hunter (2000, 3) defined general intelligence as “the ability to grasp and reason correctly with abstractions (concepts) and solve problems”. Although

there are many kinds of intelligence, practical intelligence, social intelligence, and especially emotional intelligence have received substantial attention.

According to Sternberg (2000, 1), practical intelligence is the “ability that individuals use to find the best fit between themselves and the demands of the environment”. In other words, it refers to the ability of an individual to deal with the problems and situations happening in everyday life (Bowman, Markham and Roberts 2002). In the early days, Thorndike (1920, 108) defined social intelligence as “the ability to understand and manage men and women, boys and girls to act wisely in human relations”. Vernon (1933, 44) also developed the theory of social intelligence and clarified that social intelligence is the “ability to get along with people in general, social technique or ease in society, knowledge of social matters, susceptibility to stimuli from other members of a group, as well as insight into the temporary moods or underlying personality traits of strangers”. Emotional intelligence is “the ability to monitor one’s own and others’ emotions, to discriminate among them, and to use the information to guide one’s thinking and actions”(Earley and Ang 2003, 28). Bar-On (1997, 2) then defined emotional intelligence as “an array of non-cognitive capabilities, competencies, and skills that influence one’s ability to succeed in coping with environmental demands and pressures”. Recently, Ang et al. (2007) stated that emotional intelligence goes beyond academic intelligence and it is the ability to recognize and deal with personal emotions under the variety of cultural environments. Briefly, although the various kinds of intelligence were differently defined by researchers, these definitions can be considered as a foundation to develop other facets of intelligence.

Cultural Intelligence

Cultural Intelligence, cultural quotient or CQ, a term in business, education, government and academic research can be understood as the capability to relate and work effectively across cultures. According to Van Dyne, Ang and Koh (2008, 16), “CQ is another complementary form of intelligence that explains adaptability to diversity and cross-cultural interactions”, which “differs from other types of intelligence, such as IQ and EQ, because it focuses specially on settings and interactions characterized by cultural diversity”.

Christopher Early and Soon Ang first developed the concept of CQ in Cultural Intelligence: Individual Interactions across cultures. The construct of CQ was introduced by Earley (2002) and Earley and Ang (2003) to explain differences in the effectiveness of individual interactions across cultures. CQ refers to “a form of situated intelligence where intelligently adaptive behaviors are culturally bound to the values and beliefs of a given society or culture” (Earley and Ang 2003, 59) as it is defined as a person’s capability to adapt effectively to new cultural contexts. Meanwhile, Mosakowski, Calic and Earley (2013) defined CQ as a set of values, attitudes, and behaviors that function together in a system and facilitate working across cultural divides. Earley and Peterson (2004, 89) stated that CQ “is the ability to engage in a set of behaviors that uses skills (i.e., language or interpersonal skills) and qualities (e.g., tolerance for ambiguity, flexibility) that are tuned appropriately to the culture-based values and attitudes of the people with whom one interacts”. These definitions of CQ are consistent with Schmidt and Hunter (2000)’s definition of general intelligence. Thus, following Schmidt and Hunter (2000)’s definition of general intelligence, Ang et al. (2007) concluded that CQ could be considered as a specific form of intelligence that concentrated on capabilities to grasp, reason, and behave in situations characterized by cultural diversity.

According to Thomas and Inkson (2003), culturally intelligent people have three important facets including knowledge, mindfulness and adaptive behavior and the development of Cultural Intelligence involves all these three components. In other words, people need to have a sufficient level of knowledge to understand cross-cultural differences, mindfulness to monitor and comprehend cross-cultural situations, and the ability to adapt their behavior in an appropriate way in various cross-cultural situations. People who have these three traits have a high level of CQ (Thomas and Inkson 2003). Developing Cultural Intelligence takes a considerable amount of time and this process is illustrated in Figure 3 as follows.

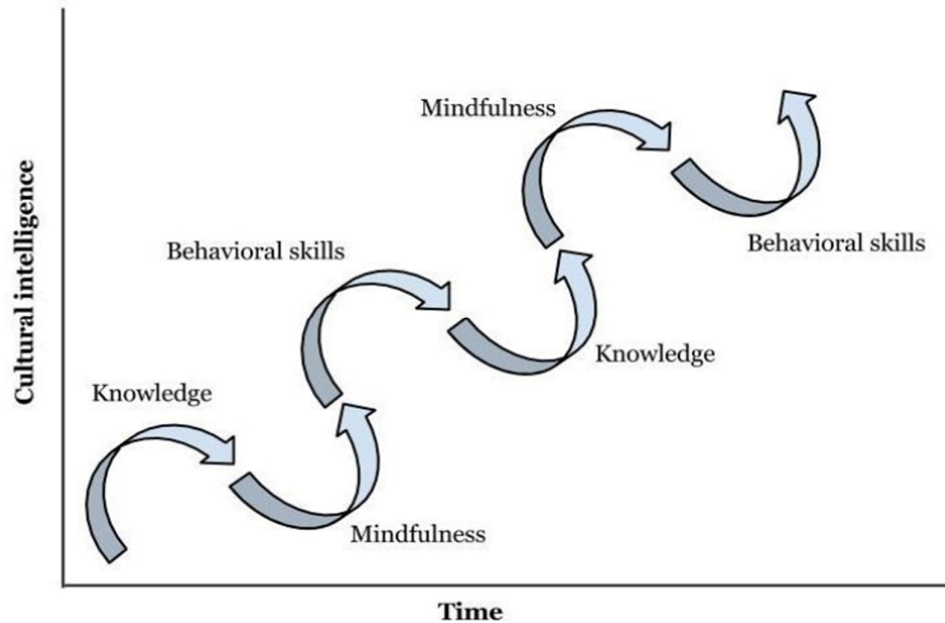


Figure 3 Gaining Cultural Intelligence³

Upon early studies of intelligence, Earley and Ang (2003) suggested a general structure of Cultural Intelligence which consists of 3 main facets including meta-cognitive CQ/ cognitive CQ, motivational CQ, and behavioral CQ (See Figure 4). Metacognitive and cognitive intelligence are more related to internal facets of CQ or mental capabilities, concerning knowledge content and innate cognitive abilities, less related to behavioral adjustment whereas motivational and behavioral intelligences are external facets of CQ or behavioral capabilities and are related to how individuals adapt and adjust to their environment in a cross-cultural setting (Ang et al. 2007; Adair, Hideg and Spence 2013). An individual who possesses a high level of all these facets has high Cultural Intelligence.

³ Adapted from Thomas and Inkson (2003)

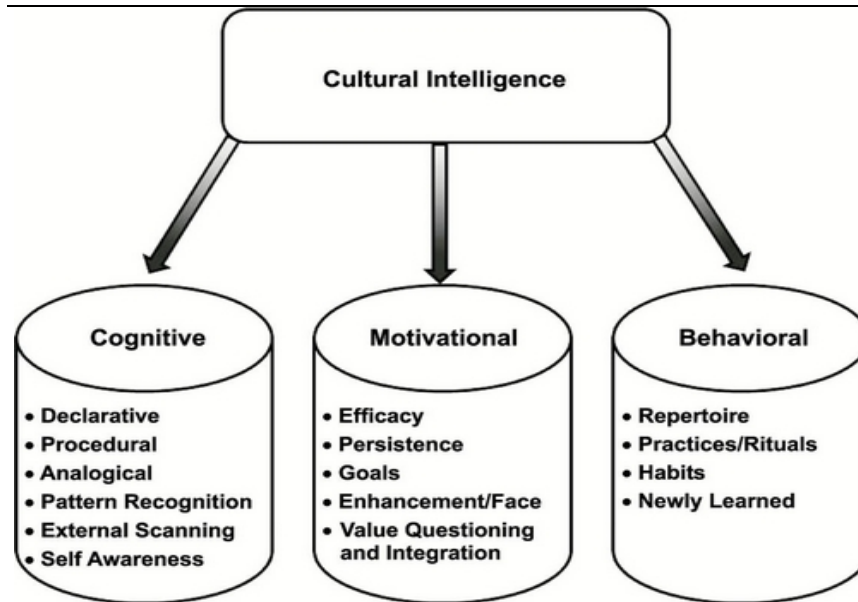


Figure 4 Facets of Cultural Intelligence⁴.

Ang et al. (2004) defined meta-cognitive CQ as an individual's knowledge or control over cognitions that leads to deep information processing. Moreover, it is considered as a person's mental processing in order to gain awareness and understand clearly a different culture in an appropriate way (Moon 2013). People who are good at meta-cognitive CQ often focus on others' cultural preferences and are aware of it before and during interactions, and then make a question for their own cultural assumptions and finally adjust their mental models with the aim of finding the preferred one (Brislin, Worthley and Macnab 2006; Triandis 2006).

Cognitive CQ refers to using internal knowledge that deals with the social environment, and information processing (Earley and Ang 2003). It is the capability to cultivate and develop a working knowledge of cross-cultural cues and patterns of appropriate behavior about economic, legal, and social aspects of different cultures gained from experience and education (Ang et al. 2004). People who have a higher cognitive CQ possess better cognitive- processing capabilities in a new cultural setting and can incorporate new information in order to understand and interpret new experiences. Thus, they have better adaptability (Kim and Slocum 2008).

⁴ Adapted from Earley and Ang (2003)

Meanwhile, motivational CQ refers to “the mental capacity to direct and sustain energy on a particular task or situation and recognize that motivational capabilities are critical to “real world” problem solving” (Ang et al. 2007, 337). Motivational CQ can be seen a symbol of the inner drive and a key factor to satisfy the need to learn about cultural differences in varying situations. Individuals with higher motivation in a cross-cultural context can gain more attention and energy to perform better and become more confident when accomplishing a given task. As a result, a person who has a higher motivational CQ has a tendency to desire more strongly in order to accept challenges in a new environment and a greater will to tolerate frustration, which leads to better adaptability (Ang et al. 2007).

Behavioral CQ can be seen as the ability to express the appropriate verbal and non-verbal behaviors when interacting with other people from a different cultural background (Ang et al. 2004; Ng and Earley 2006). According to Ang et al. (2004), this kind of CQ includes an individual’s ability to be sensitive to changing conditions within a multi-cultural setting and be flexible to adjust behaviors in a appropriate way accordingly. Anyone with a higher behavioral CQ is able to act in a good manner in multicultural settings based on their broad range of verbal and non-verbal capabilities, such as words, tone of voice, language, gestures, and facial expressions, thus gaining easier acceptance by the associated group so that they can develop better interpersonal relationships (Gudykunst, Ting-Toomey and Chua 1988)

2.3 Multicultural teams

Team

Researchers present many interpretations towards defining a team. According to Katzenbach and Smith (1993, 112), they claimed that “a team is a small number of people with complementary skills who are committed to a common purpose, performance goals, and approach for which they hold themselves mutually accountable”. Meanwhile, based on the researches by Susan and Diane (1997) and Marquardt and Horvath (2001), Harrison, Price and Bell (1998, 5) clarified it as “a collection of individuals who are interdependent in their tasks, who share responsibility for outcomes, who see themselves and are seen by others as an

intact social entity embedded in one or more larger social systems, and who manage their relationships across organizational boundaries and beyond”.

Types of teams

There are several typologies of team categorization. They are formal and informal teams, task forces, committees, self-managed team and virtual teams (Halverson and Tirmizi 2008). Formal teams have strong organizational structures because team members have distinct roles and specified workload. This kind of teams is often set up for a particular task so as to accomplish it within a specific timeframe. On the contrary, informal teams solve a particular problem, but the members of this team can be changed according to the task to be achieved. However, the level of interdependence in informal teams is lower than that in formal teams (Halverson and Tirmizi 2008). According to Halverson and Tirmizi (2008), task forces are created for a specific project of teams, and they have a great deal of interdependence between members and a substantial emphasis on performance and timetables. A committee performs is similar to task forces, but it has the higher level of members’ autonomy and different levels of interdependence compared to task forces. Self-managed teams have the greatest level of autonomy from the organization, and they combine aspects of formal and informal teams. Besides, virtual teams are created and joined electronically. Thus, members of virtual teams do not have to meet face-to-face to communicate as their formation and participation use the means of technology (Halverson and Tirmizi 2008).

Teams can also be classified in terms of diversity. Homogeneous teams are those in which all members come from the same cultural group and share a similar background and multicultural teams in which members come from more than one culture (Adler and Gundersen 2007). According to Adler and Gundersen (2007), multicultural teams can be divided into three types: token teams in which a single member from another culture, bicultural teams in which members come from two cultures, and multicultural teams in which members come from three or more cultures and represent three or more ethnic backgrounds.

Multicultural teams

Marquardt and Horvath (2001) defined “multicultural teams as task oriented groups comprising people of different cultural backgrounds”. Following

Marquardt and Horvath (2001) and Susan and Diane (1997), Halverson and Tirmizi (2008, 8) defined multicultural teams (or MCTs) as “a collection of individuals with different cultural backgrounds, who are interdependent in their tasks, who share responsibility for outcomes, who see themselves and are seen by others as an intact social entity embedded in one or more larger social systems, and who manage their relationships across organizational boundaries and beyond”. Thus, there is no doubt that having MCTs with high CQ is very essential in order to build this sort of momentum, and to establish or maintain effective team-work over time (Earley, Ang and Tan 2006).

2.4 Team performance

Performance

Performance is defined as behaviors concerning the goals of the organization (Colorado State Univ Fort Collins, Murphy and Kroeker 1988) while Campbell, McHenry and Wise (1990) defined performance as those actions or behaviors under the control of the individual, contributing to the organization’s goals. Particularly, according to Campbell (1999), performance is considered as the function of knowledge, skills, abilities and motivation of members directed at role-prescribed behavior, such as formal job responsibilities.

Performance dimensions

At the individual level, performance related to output of individual group members need to be firstly considered. Second, people look at the affective responses of individuals and then look at the learning at individual level (Nijstad 2009)

At the group level, the first dimension relates to how well the group has performed on group tasks. The second one is group-level affective response and the last one is group learning (Nijstad 2009).

Team performance

Team performance as a whole is composed of the outputs produced by the group for the whole tasks, along with the contribution of each individual member in a team to the outcome success of the whole team (OPM website 2016). According to Salas, Goodwin and Burke (2009, 41) team performance is “a multilevel

process arising as team members enact both their individual task-work performance processes and individual and team-level teamwork processes”. Thus it can be said that performance is the combination of both individual performance and teamwork processes. Following Campbell, McHenry and Wise (1990)’s definition of performance, this definition is consistent with the conceptualization of performance as a process and not an outcome.

According to Nijstad (2009), a general framework of group performance has five elements including group members, group tasks, group interaction processes, group output, and group context. Group members can be considered as a necessary foundation for task performance because individual motives, personalities and moods also affect group performance. Meanwhile, group output can be judged on different dimensions at both individual and group levels. However, the choice for output dimensions should be based on research objectives and characteristics of the group tasks (Nijstad 2009). And finally, Nijstad (2009, 57) also concluded that “group context consists of the physical and social environment of the group and influences all other elements of the framework”.

3. Proposed hypotheses and research model

The proposed hypotheses in this section are based on existing theories on the effects of cultural diversity on team performance and the relationship between Cultural Intelligence and team performance to address the research question. Subsequently, research model adapted from previous studies is developed.

3.1 Effects of cultural diversity on team performance

The relationship between diversity and team performance are mixed and even contrasting in previous researches (Mannix and Neale 2005; Van Knippenberg and Schippers 2007; Nakui, Paulus and Van Der Zee 2011). As discussed above, three theoretical approaches have commonly been chosen to explain the antagonistic effects of diversity: information-processing, similarity-attraction and social categorization perspectives (Williams and O’Reilly 1998). According to Moon (2013), an information-processing perspective presumes the positive effects of diversity, which argues that diversity brings positive contributions to teams. Following this perspective on diversity, diverse teams have the potential to

perform better than mono-cultural teams due to increased openness, creativity, learning, and flexibility as well as owing to broader search space, better problem solving, and new combinations of knowledge (Günter et al. 2010).

In contrast, both similarity–attraction and social categorization perspectives have negative effects of diversity on team performance. According to Williams and O’Reilly (1998) and Earley and Ang (2003) in terms of the similarity- attraction perspective, in general, people tend to prefer team members that display similarities with regard to gender, age, race, values and beliefs. Thus, people tend to identify individuals whom they share national and cultural identities with. Moreover, according to Earley and Mosakowski (2000) nationality, cultural origin, and ethnicity have been the most prominent social categories by which people tend to categorize themselves into specific groups, so social categorization of in-groups and out-groups can be problematic in collaboration and communication in top management teams (TMTs) (Moon 2013). According to these perspectives, diverse teams are likely to perform worse than homogeneous teams since they lack economies of scale in the knowledge production, increase distrust, conflict, and dissatisfaction, and decrease social integration (Günter et al. 2010).

Earley and Mosakowski (2000) also pointed out that culturally homogeneous teams perform better than culturally diverse teams in the short run. However, the gaps in performance are diminished over time and the time members spend working together neutralized or minimized the effects of surface-level diversity on group cohesiveness (Harrison, Price and Bell 1998). In agreement, Williams and O’Reilly (1998) suggested that increased cultural diversity has negative effects on social integration, conflict and intercultural communication.

Most commonly, authors have categorized diversity into surface- and deep-level diversity (Zellmer-Bruhn et al. 2008; Günter et al. 2010). According to Günter et al. (2010), surface-level diversity is generally understood as differences among team members in overt demographic characteristics, such as race, gender, age or ethnicity, which possibly triggers similarity-attraction and social categorization. Meanwhile, deep-level diversity refers to differences in psychological characteristics, such as personality, values and attitudes, associated with

information-processing effects due to difference in cognitive perspectives (Mannix and Neale 2005; Günter et al. 2010).

However, several authors also found that surface- and deep-level diversity have diverging effects on team performance (Jehn, Northcraft and Neale 1999; Mannix and Neale 2005). According to Jehn, Northcraft and Neale (1999, 741), “while social category diversity positively influenced group member morale, value diversity decreased satisfaction, intent to remain, and commitment to the group”. Moreover, surface-level may have an adverse impact on team performance and deep-level cultural attributes are likely to influence this performance negatively, because according to Sitkin and Roth (1993), value conflicts normally imply that there is no common ground on which to collaborate and communicate. However, deep-level attributes may also exert a positive influence on the team process. In other words, deep-level attributes have a stronger impact on the social categorization process compared to surface-level indicators over time (Roberge and van Dick 2010) due to the fact that people prefer interacting with people who share similar value structures. Günter et al. (2010) conducted a meta-analysis of research on multicultural teams, and the results did not show any differential effects of surface- versus deep-level diversity on team performance.

Although the existing theories are different regarding the relationship between cultural diversity and team performance, it seems that most studies highlighting the strategic advantages provided by multicultural teams are outnumbered by studies emphasizing the detrimental effects of cultural diversity on team performance (Gelfand, Erez and Aycan 2007). Deep-level and surface-level diversity may affect team processes in different ways, but the direction of the effect is not clear. Thus, due to time constraint for the thesis, we have difficulties measuring the effect of cultural diversity on performance over the time period, therefore, we will explore this relationship between cultural diversity and MCTs’ performance in our analysis regardless of how long the team has been set up, and propose the following hypotheses:

Hypothesis 1: Cultural diversity negatively affects MCTs’ performance.

Hypothesis 1a: Surface-level diversity negatively affects MCTs’ performance

Hypothesis 1b: Deep-level diversity negatively affects MCTs’ performance

3.2 Relationship between Cultural Intelligence and Team performance.

According to Zellmer-Bruhn et al. (2008), while individuals can gain from working together, diversity can interfere with members' ability to exchange and integrate their knowledge and skills. Therefore, it can be said that individuals with positive attitudes towards cultural differences perform better in diverse teams, which illustrates the moderating effect of CQ on cultural diversity's negative relation to team performance (Moon 2013).

According to Earley, Ang and Tan (2006), culturally intelligent teams facilitate team performance by developing collective optimism, efficacy, and identification within teams while overcoming the challenge of managing a diverse workforce. Furthermore, MCTs with high CQ is very essential in order to establish or maintain effective teamwork over time (Earley, Ang and Tan 2006). Moon (2013) indicated that cultural intelligent teams not only diminish the negative impact of cultural diversity on interpersonal trust, but also promote identification within teams. Team members' Cultural Intelligence also results in a greater acceptance of cultural diversity and an increased willingness to share knowledge, which improves a team's performance (Moon 2013).

CQ facilitates the effective operations of culturally diverse teams by providing the necessary capabilities to cope with problems from multicultural situations, and engage in cross-cultural interactions (Van Dyne, Ang and Koh 2008). Rockstuhl and Ng (2008) examined the relationship between CQ and interpersonal trust in MCTs and found that CQ diminished the negative impact of cultural diversity on interpersonal trust within teams. Correspondingly, Moon (2013) claimed that CQ was predicted to improve performance in MCTs, where better understating and obtaining of cultural diversity and effective team decision making could be a tremendous asset for highly interdependent cross-cultural team activities. More specifically, a high level of team CQ may not only weaken the negative effect of cultural diversity on initial team performance but also may accelerate the rate of improvement in team performance. Therefore, we suggest to investigate this relationship through the following hypotheses.

Hypothesis 2: CQ will moderate the relationship between cultural diversity and MCTs' performance. Or in other words, a higher level of team CQ will

significantly weaken the negative effect of cultural diversity on MCTs' performance.

Hypothesis 3: CQ will positively impact MCTs' performance

In terms of motivational CQ, this concept includes intrinsic and extrinsic interest and self-efficacy to adjust. Intrinsic interest characterizes a person's enthusiasm when learning about his own culture. It contrasts with extrinsic interest for those who are more fascinated about other cultures, and find learning about cultures more satisfying. The extrinsic interest compared with the intrinsic, is more focused on the personal benefits that could be extracted from culturally diverse experiences. Self-efficacy to adjust concerns the confidence in one's ability to adjust to new cultures or interact with people from different cultures (Van Dyne et al. 2012). It rewards the individual holding high self-efficacy with an increased level of confidence, which makes interaction in culturally diverse environments easier and more pleasing, therefore possessing more power and determination for gaining better performance in the cross-cultural setting. Thus, we hypothesize that:

H2a: In MCTs, motivational CQ positively moderates the relationship between cultural diversity and team performance.

H3a: Motivational CQ positively impacts MCTs' performance

In terms of cognitive CQ, it consists of culture-general and culture-specific knowledge. It is the general understanding of important elements representing a cultural environment that helps people to recognize how a cultural system influences behaviors and interactions of other people and why this is different for every culture (Van Dyne et al. 2012). Having cognitive CQ enables people to make well-founded judgments in culturally diverse situations (Van Dyne, Ang and Koh 2008).

Generally, individuals with high cognitive intelligence know more about the legal, economic and social systems of other countries, and therefore are better at spotting differences and analogies across cultures (Ang et al. 2007).

Therefore, this ability will positively moderate the relationship between cultural diversity and team performance.

H2b: In MCTs, cognitive CQ positively moderates the relationship between cultural diversity and team performance.**H3b: Cognitive CQ positively impacts MCTs' performance**

In terms of metacognitive CQ, team members who are curious about experiencing new (social) situations may benefit from metacognitive CQ. Individuals with high metacognitive CQ prepare for or strategize before culturally diverse encounters, called planning. During intercultural interactions, those individuals display a high degree of awareness with regard to how culture influences their own and others' mental models. During and after culturally diverse encounters, these individuals constantly check their own assumptions and adjust their mental maps when actual experiences differ from expectations (Van Dyne et al. 2012). Ang, Dyne and Koh (2006) stated that the combination of being open to experience and metacognitive CQ leads to "thinking about thinking". These three processes occur and describe the individual's ability for deep cultural information processing. According to Ang et al. (2007), metacognition positively affects task performance facilitating a more constructive cooperation among the group members (Susan and Diane 1997). Hence, it is assumed that:

H2c: In MCTs, metacognitive CQ positively moderates the relationship between cultural diversity and team performance.**H3c: Metacognitive CQ positively impacts MCTs' performance**

According to Ng, Van Dyne and Ang (2009), behavioral CQ has more components which are verbal behavior, non-verbal behavior and speech acts. Verbal behaviours concern the flexibility in vocalization (accent, tone). Non-verbal behaviours represent the flexibility in communication that is conveyed via gestures, facial expressions, and body language, rather than through words. Speech acts include the flexibility in manner of communicating specific types of messages such that requests, invitations, apologies, gratitude and saying 'no' are expressed appropriately based on local standards.

Verbal flexibility is said to foster effectiveness of communication, non-verbal flexibility shows respect for various cultural norms, and the flexibility of speech-acts expresses a deep level of understanding of communication which facilitates

the interaction amongst diverse cultures (Van Dyne et al. 2012). Therefore, behavioral CQ can positively affect the relationship between cultural diversity and performance within a multicultural team. In sum, people with a high level of behavioral CQ can increase the quality of the performance by adjusting their behavior to the cultural demands of their team members. Therefore, it is assumed that:

H2d: In MCTs, behavioral CQ positively moderates the relationship between cultural diversity and team performance.

H3d: Behavioral CQ positively impacts MCTs' performance

To summarize, Table 1 below offers an overview of the hypotheses to be tested in our empirical study and the theoretical linkages to the constructs.

Table 1 Overview of the hypotheses in the study

	Hypotheses	Theoretical linkage	Samples
H1	Cultural diversity negatively affects MCTs' performance	Moon (2013)	Students in a large business school in Korea
H1a	Surface-level diversity negatively affects MCTs' performance	Kirkman and Shapiro (2005)	Employees from 2 MNCs in the US and Philippines
H1b	Deep-level diversity negatively affects MCTs' performance	Jehn, Northcraft and Neale (1999)	Employees in one of the top three firms in the household goods moving industry
H2	CQ moderates the relationship between cultural diversity and MCTs' performance	Moon (2013)	Students in a large business school in Korea
H2a	In MCTs, metacognitive CQ positively moderates the relationship between cultural diversity and team performance.		
H2b	In MCTs, cognitive CQ		

	positively moderates the relationship between cultural diversity and team performance.		
H2c	In MCTs, motivational CQ positively moderates the relationship between cultural diversity and team performance.		
H2d	In MCTs, behavioral CQ positively moderates the relationship between cultural diversity and team performance.		
H3	CQ positively impacts MCTs' performance	Chen, Lin and Sawangpattanakul (2011)	Philippine laborers in Taiwan
H3a	Metacognitive CQ positively impacts MCTs' performance	Moon (2013)	Students in a large business school in Korea
H3b	Cognitive CQ positively impacts MCTs' performance		
H3c	Motivational CQ positively impacts MCTs' performance		
H3d	Behavioral CQ positively impacts MCTs' performance		

3.3 Research Model

This study attempts to examine the relationships between cultural diversity, CQ and performance in MCTs. More specifically, it hypothesizes a moderating effect of CQ on the relationship between cultural diversity and team performance.

Hence, the following conceptual research models illustrate the relationship as presented in the extant literature review.

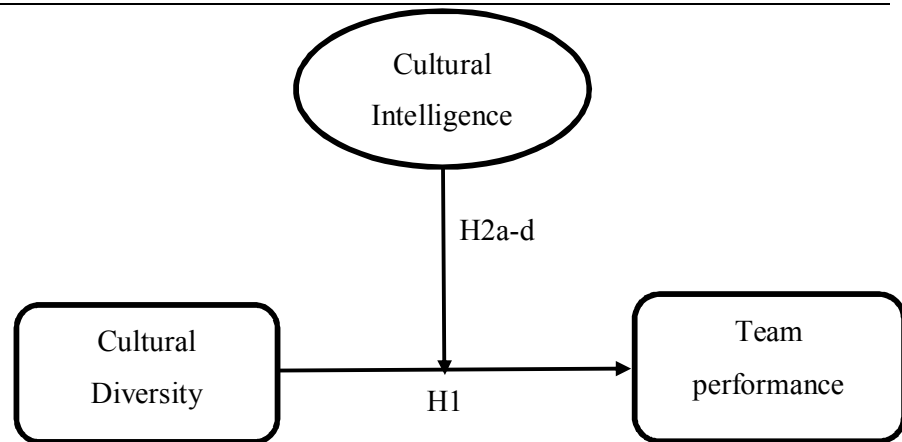


Figure 5 Conceptual model for Hypothesis 1, Hypotheses 2a-d⁵.

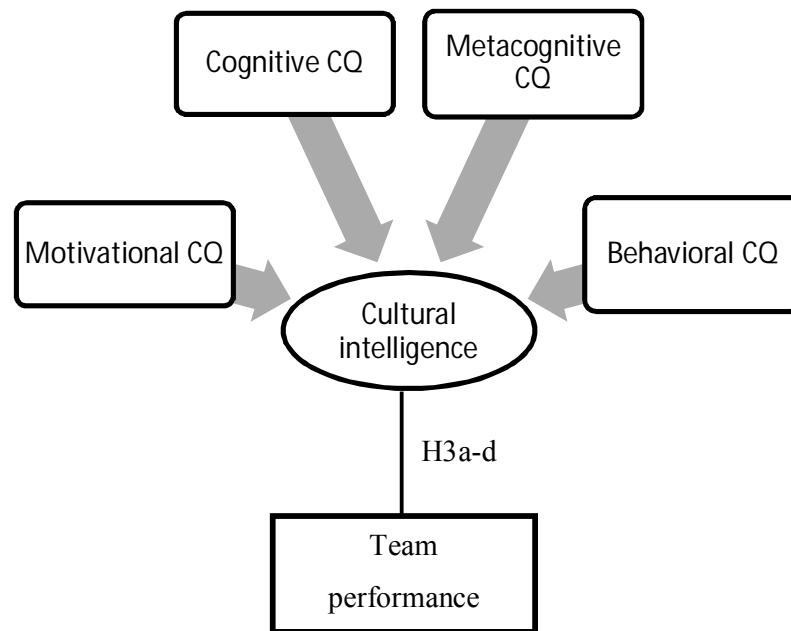


Figure 6 Conceptual model for Hypotheses 3a-d⁶.

4. Research Design and Methodology

4.1 Sample & Data Collection

Data were obtained through surveys from people who work in multicultural teams of multinational companies in Vietnam. The surveys were distributed online

⁵ Adapted from Moon (2013)

⁶ Adapted from Chen, Lin & Sawangpattanakul (2011)

through Qualtrics tools. Data were collected in April and May, 2016 and stratified convenience sampling was applied for this study. All in all, we had 227 observations from 147 multicultural groups in MNCs in Vietnam, with a 75% response rate. Respondents were mostly from a range of finance and service organisations based in Vietnam. Please see Appendix B for survey items, cover letter and data collection details.

4.2 Level of Analysis

The primary interest of the study at hand concerns team-level data. However, the research design is confined by restrictions with regard to the availability of team data. Although gathering data from all team members is not impossible, guaranteeing the completeness of team responses proves very difficult due to the time lag of data collection and to anonymity concerns. Team-level data that lack responses from one or more team members would impair the outcomes of the study at hand. Consequently, the study at first will rely on perception-based individual-level data for measuring team-level constructs and find out more about the effects of multiple factors (nationality, business experience, language barrier, etc.) impacting performance of MNCs. After that, we transformed the numbers into group-level data with team size as the control variable in order to analyze the complicated relationships among variables and compare the results with individual level.

4.3 Measures

Measurement items are mainly adapted from the previous researches appropriate for our study context. All the measures include a set of Likert-type seven-level or five-level agree/disagree statements. Firstly, data were gathered from individuals in each group. Items were back-to-back translated and pilot tested in order to ensure reliability of the meaning of the questions in the Vietnamese setting.

4.3.1 Cultural diversity

This study focuses on measuring two types of diversity: surface- and deep-level diversity. The measurements of cultural diversity are based on perceived social category and work style similarity of Zellmer-Bruhn et al. (2008) and value

diversity coined by Jehn, Northcraft and Neale (1999) (See Appendix B1). Social category similarity refers to surface-level diversity, explained by similarity attraction and social categorization while work style similarity and value diversity are used to measure deep-level diversity associated with information-processing/decision-making framework (Zellmer-Bruhn et al. 2008; Günter et al. 2010; Lebrón 2013)

Perceived similarity, which is defined as the degree to which members view themselves as having differences, is used to indicate the degree and type of diversity within a team (Zellmer-Bruhn et al. 2008). Its scale balances among differences and similitudes of team members, and contains 8 affirmative statements, with which respondents will have to agree or disagree. First, a three-item scale measures perceived social category similarity (SCS), by asking respondents to rate the extent to which members feel their team is similar with respect to cultural background, nationality and ethnicity. Second, perceived work style similarity (WSS) is measured by a five-item scale indicating the extent to which members feel their team is similar with respect to work habits, interaction styles, communication styles, work ethic and personalities. In brief, results support using the mean of individual responses as a measure of both SCS and WSS (Zellmer-Bruhn et al 2008). Each of these scales will use a seven-point response format (1 = disagree strongly, 7 = agree strongly).

Additionally, Jehn, Northcraft and Neale (1999) uses value diversity which arises when members of a workgroup diverge in terms of what they think the group's actual tasks, goals or mission should be (Jehn, Northcraft and Neale 1999). The questions are measured using a 5-point Likert scale anchored by "1 = strongly disagree" and "5 = strongly agree. Team members are asked if the values of all team members were similar, if the team as a whole had similar work values, if the team as a whole had similar goals, whether members had strongly held beliefs about what was important within the team, whether members had similar goals, and if all members agreed on what was important to the team (Jehn, Northcraft and Neale 1999).

4.3.2 *Cultural intelligence*

The multidimensional concept of CQ is also reflected in the questionnaire items. Developed and validated by Ang et al. (2007), multidimensional Cultural Intelligence scale (CQS) with 20 items follows the construction of CQ in four distinct factors including cognitive, meta-cognitive, motivational, and behavioral CQ. In the research by Ang et al. (2007), Cultural Intelligence scale is used to predict differential relationships between the four CQ dimensions (metacognitive, cognitive, motivational and behavioural) and three intercultural effectiveness outcomes (cultural judgment and decision making, cultural adaptation and task performance) in culturally diverse settings. Ang and Van Dyne's Cultural Intelligence Scale has experienced an extensive validation process to assess the generalizability of the CQS across multiple students and executive samples, across time periods from four weeks to four months and across different countries so it can be seen as a reliable Cultural Intelligence scale for the setting of our study. CQS consists of four different items for metacognitive CQ (e.g., "I am conscious of the cultural knowledge I use when interacting with people with different cultural backgrounds"), six items for cognitive CQ (e.g., "I know the legal and economic systems of other cultures"), five for motivational CQ (e.g., "I enjoy living in cultures that are unfamiliar to me"), five for behavioral CQ (e.g., "I alter my facial expressions when a cross-cultural interaction requires it"). In order to calculate the overall mean for CQ, the means of four dimensions were calculated and then averaged for getting the result. Respondents are asked to select the response that best describes their capabilities using a seven-point Likert-type scale to indicate the extent. Respondents choose the option in the seven-point Likert-type scale ranging from strongly disagree (1) to strongly agree (7).

A list of the items is given in Appendix B2.

So as not to bias the answers of the respondents, no specific information has been brought up relating the particular content of these four factors. Since the wording of a question may influence the respondent's answer tendency to a certain extent, which can have a dramatic effect on the results (Balnaves and Caputi 2001)

4.3.3 Team Performance

In order to evaluate the team performance of the multicultural diverse teams, this study would use a three-item scale developed by Heilman, Block and Lucas (1992) (See Appendix B1). The items from this scale include “Our work unit is very competent,” “Our work unit gets the work done very effectively,” and “Our work unit has performed the job well.” Respondents choose the option in the five-point Likert-type scale ranging from strongly disagree (1) to strongly agree (5).

4.3.4 Control variables

The authors used 6 variables (gender, nationality, business experience, team size, living abroad, language barrier) for individual level while only 1 variable (team size) for team level. Due to the lack of data from all members of a team, the authors couldn't control for other variables in team level.

Gender and nationality are important controls for CQ because it has been argued that team members perceive other members based on surface-level diversity, including factors such as ethnicity and gender (Harrison, Price and Bell 1998; Moon 2013). In general, people like to work with others who display similarities with regard to gender and nationality (Williams and O'Reilly 1998; Earley and Ang 2003). Thus, the respondents will be asked to indicate their gender, and nationality. The answer to the question of nationality are Vietnam, other Asian countries and others.

Business experience enriches the horizons of individuals by consequently making them more cultural intelligent (Earley and Ang 2003), those who were previously exposed to international business environments are less likely to experience difficulties in MCTs (Ang et al. 2007). To measure business experience, participants are asked about number of years of business experience. They can choose the answer of 1 - 5 years, 5 - 10 years, 10 - 20 years and more than 30 years.

Team size reinforces the negative effect of cultural diversity on communication effectiveness and satisfaction (Günter et al. 2010). Larger teams are more likely to experience conflict than smaller groups. Conflict in its turns, will negatively affect performance and satisfaction from collaboration. Therefore, when accounting for

the effect of satisfaction or diversity, team size would be used as a control as proposed by Zellmer-Bruhn et al. (2008) and Günter et al. (2010). This variable will be measured by asking respondents how many members there are in their team.

Living abroad is considered as a control variable. Takeuchi et al. (2005) suggested that prior international experience has a positive effect on cross-cultural adjustment and is therefore likely to increase an individual's CQ. Thus, this variable will be measured by asking respondents if they have ever lived in a foreign country for longer than six months. The respondents can answer yes or no.

Language barrier is controlled in our study because because good verbal communication is one of of requirement in team work and impacts team performance directly, for instance, differences in language and communication skills can have a negative effect on the interaction between team members (Ang et al. 2007). We will ask respondents to what extent you experience interaction difficulties based on language barriers. The answers from which respondents can choose are never, seldom, sometimes and often.

5. Data Analysis

After completing data collection, the data were retrieved from the online questionnaire in the form of Stata IC 14 file. The following section describes every action that was performed on the data set. Firstly, the data were prepared, edited and screened. The data set was checked for outliers. Reliability analyses were performed given that relatively new scales as well as one modified scale were used. Secondly, preliminary analyses were performed. Descriptive and frequency statistics were calculated for control variables in order to draft a first picture of the sample. As a third step, assumptions concerning normality, linearity, homoscedasticity and independence were tested. Lastly, correlations between variables were tested in order to establish, which variables were related. regression analyses were performed in order to test hypotheses.

5.1 Preparing the Data File

Data collection yielded a total of 304 responses, of which 77 are missing. For the most part, this provides a sample of 227 participants, comprising from 147 groups.

At individual level, regression analyses require samples to meet two following basic conditions to test individual predictor's contributions (Pallant 2013). Firstly, the minimal acceptable sample size to test the overall fit of the model has to be equal to or greater than $50 + 8*k$, where k is the number of independent variables. Secondly, the number of participants should exceed $104 + k$, such that contributions of individual predictors can be tested. Since the sample is both, larger than 122 ($50 + 8*9$) and 113 ($104 + 9$), all requirements are met.

At team level, after checking if each team consists of a minimum of two respondents, assumptions of multiple regression could be tested. Since the data collection resulted in a sample size of 147 teams, it is assumed that the assumptions for multiple regression are met.

5.1.1 Editing the data

Firstly, we created numerical or string variables for each questionnaire item. Categorical items were typified as nominal while continuous variables were marked as ordinal or scale variables. If there are missing values, which are items that respondents did not fill in, the survey was not counted.

Given that *Social Category Similarity*, *Work Style Similarity* and *Value Similarity* have already indicated that similarity is measured. Hence, scores on *WSS*, *SCS*, and *VS* scales indicate higher levels of similarity, rather than higher degrees of diversity.

After aggregating variables, the means of each facet of the scale were calculated and then averaged to generate an overall *motivational CQ*, *cognitive CQ*, *metacognitive CQ*, *behavioural CQ*, *CQ*, *Social Category Similarity*, *Work Style Similarity*, *Value Similarity* and *Team Performance mean*. At team level, all variables were mean centred from the sample mean of all individual variables of that team.

5.1.2 Outliers

Incorrect and extreme values were detected after entering all the data. Although boxplots present some outliers, we found no errors because all values stay within the possible range. Therefore, we kept all values in the data set.

5.2. Preliminary Analysis

5.2.1 Reliability results

The individual level data were used to test for the reliability of measurement construct.

Construct validity

To assess construct validity of variables, we used both exploratory factor analysis and confirmatory factor analyses as recommended by Anderson, Gerbing and Masters (1988). The exploratory factor analysis was performed with all the items loading on their theoretical factor solutions. Also, the Cronbach's alpha for each coefficient yielded satisfactory results, which were greater than 0.70 (See Table 2). Then confirmatory factor analyses were conducted to support for the construct validity of the measurement construct with the following indices used to assess model fit: the chi square test, the comparative fit index (CFI), the Tucker-Lewis index (TLI), the root mean square error of approximation (RMSEA), and the standardized root mean square residual (SRMR). Models with TLI and CFI values in the 0.80s and 0.90s or higher indicate an acceptable fit; RMSEA and SRMR having values close to, respectively 0.06 and 0.08 or lower indicate an acceptable fit, and values up to 0.10 indicate a reasonable fit (Marsh, Balla and McDonald 1988; Browne and Cudeck 1993; Hu and Bentler 1999).

In Perceived Similarity with Social Category Similarity and Work Similarity, the results of the CFA suggested that the data fit this two-factor model with $\chi^2(19) = 44.964$, TLI = 0.962, CFI = 0.974, RMSEA = 0.078, SRMR = 0.041. Value Similarity Scale also showed satisfactory fit with $\chi^2(5) = 111.545$, TLI = 0.776, CFI = 0.866, RMSEA = 0.224, SRMR = 0.065. For Cultural Intelligence Scale, we tested and compared the various alternative models suggested by Ang et al. (2004). From the results, we could see that the four-dimensional structure showed comparative fit in an acceptable range:

$\chi^2 (164) = 363.657$, TLI = 0.933, CFI = 0.942, RMSEA = 0.073, SRMR = 0.046, which was better than other alternative models suggested (See Appendix F). With Team performance Scale, the single-factorial model revealed satisfactory fit ($\chi^2 (0) = 0.000$, TLI = 1.000, CFI = 1.000, RMSEA = 0.000, SRMR = 0.000)

Convergent validity

In Perceived Similarity Scale, each of eight items in this scale might tap into one of the two dimensions of scale, and allow these dimensions to be correlated, principal confirmatory analysis with an oblique (Promax) rotation performed for improvement of interpreting the results. The result presented in Table 2 proves the two-factor structure of the scale with all loadings being statistically significant and each item loading highest in their specified latent factor, as expected theoretically. Similarly, for other scales Value Similarity, Cultural Intelligence and Team Performance, structure coefficients also showed that the items correlated highest with their specified latent factor (See Table 2). All items have significant factor loadings, demonstrating convergent validity. Only the item WS1 shows a low loading of 0.1337 (See Table 2) and we tried to delete it from the data, but the results didn't show any difference. Therefore, we decided to keep the item WS1.

Discriminant validity

To test the distinctiveness of scales, we followed the procedure conducted by Conger, Kanungo and Menon (2000), using confirmatory factor analysis. The relationship between the constructs of Cultural Intelligence and Cultural Diversity was conducted on 18 indicators (4 indicators of Cultural Intelligence, 3 indicators of Social Category Similarity, 5 indicators of Work Similarity and 6 indicators of Value Similarity) on a four factor model. The hypothesized four factor model showed $\chi^2 (129) = 428.506$, TLI = 0.858, CFI = 0.881, RMSEA = 0.101, SRMR = 0.098, which suggests the model fit the data. In comparison, the single factor model with all indicators loading on a single factor had $\chi^2 (135) = 1607.955$, TLI = 0.334, CFI = 0.412, RMSEA = 0.219, SRMR = 0.189. The chi-square difference was highly significant, suggesting the distinctiveness of those 4 constructs. Similarly, the same test was carried out for the distinct relationship between Cultural Diversity and Team Performance and the same

result was found out in this case (χ^2 for four-construct model = 403.43 (df = 113) vs. single-construct model = 1995.95 (df = 119)). However, examination of correlation (See Table 3) revealed that Team Performance and Value Similarity are highly correlated ($r = 0.7062$), suggesting these two measures may not be sufficiently distinct. Therefore, the four-factor model was modified by loading the indicators of Team Performance and Value Similarity on a single-factor. The resulting three-factor model had $\chi^2 (116) = 582.30$, which is 178.87 of chi-square difference compared to the four-factor model. For Cultural Intelligence and Team Performance, 7 indicators were loaded on a two-factor model and a single-factor model. The resulting two factor model showed $\chi^2 (13) = 20.186$, TLI = 0.989, CFI = 0.993, RMSEA = 0.049, SRMR = 0.032. Compared to the single factor model $\chi^2 (14) = 306.352$, TLI = 0.591, CFI = 0.727, RMSEA = 0.303, SRMR = 0.133, showing a significant difference of chi-square value of 286.166. In summary, every case resulted in a significant difference, suggesting no problems found with discriminant validity in all measures of constructs in the measurement model (Anderson, Gerbing and Masters 1988).

Table 2 Construct items with factor loadings and construct reliabilities.

<i>Items of the constructs in the questionnaire</i>	<i>Factor loadings</i>	<i>Cronbach's alpha</i>
Social Category Similarity		0.9074
SCS1	0.8652	
SCS2	0.8325	
SCS3	0.8630	
Work Similarity		0.7862
WS1	0.1337	
WS2	0.3619	
WS3	0.7654	
WS4	0.8582	
WS5	0.4498	
Value Similarity		0.8744
VS1	0.6252	
VS2	0.7489	
VS3	0.7634	
VS4	0.8008	
VS5	0.7953	
VS6	0.7771	
Metacognitive CQ		0.9184
MC1	0.6209	
MC2	0.7811	
MC3	0.7591	
MC4	0.4897	
Cognitive CQ		0.9060
COG1	0.6851	
COG2	0.5242	
COG3	0.8213	
COG4	0.7702	
COG5	0.7963	
COG6	0.6574	
Motivational CQ		0.8591
MOT1	0.6716	
MOT2	0.7344	
MOT3	0.7052	
MOT4	0.5793	
MOT5	0.4296	
Behavioral CQ		0.9216
BEH1	0.6275	
BEH2	0.7492	
BEH3	0.8277	
BEH4	0.8376	
BEH5	0.8455	
Cultural Intelligence		0.8703
MC	0.8671	
COG	0.7881	
MOT	0.7677	
BEH	0.7452	
Team performance		0.9147
TP1	0.8161	
TP2	0.8905	
TP3	0.9105	

5.2.2 Aggregation Issues

To assess the appropriateness of aggregating individual scores to the team level, the ICC is an important statistical tool since it measures the extent to which team

members' responses agree with each other and differ from other teams. According to Edmondson (1999), data gathered from individual respondents must converge, such that the intra-class correlation (ICC) is greater than zero. The ICC values for CQ is 0.574456 with $p < 0.001$, for SCS is 0.736578 with $p < 0.001$, for WS is 0.54144 with $p < 0.001$, for VS is 0.783740 with $p < 0.001$, for TP is 0.62467 with $p < 0.001$. The fact that these results are statistically significant supports the analysis of the data at the group level.

5.2.3 Descriptive Statistics

This section illustrates information from descriptive analysis of control variables. Although 304 respondents filled in the online questionnaire, only 227 participants finished it, which yielded a drop-out rate of 25%. There are 92 male (40.53%) and 135 (59.47%) female respondents. Most of them are from Vietnam with 155 (68.28%) respondents. Second largest group were from other Asian countries with 47 (20.7%) respondents, and the other countries with 25 (11.01%) participants. 159 (70.04%) respondents have started their business since 1-5 years, 53 (23.35%) in 5-10 years, 13 (5.73%) in 10-20 years, and 2 (0.88%) in more than 30 years. As much as 105 (46.26%) respondents have lived abroad for more than 6 months while 122 (53.74%) have never done. Living abroad is likely to have increased the level of CQ (Takeuchi et al. 2005), making its effect more interesting to study.

Additionally, the sample is experienced in interaction difficulties. In that sense, 5 (2.2%) respondents never meet interaction difficulties based on language barriers, 45 (19.82%) respondents seldom meet those difficulties, and 43 (18.94%) respondents often. The most significant percentage (59.03%) of respondents answered that they sometimes experienced interaction difficulties due to the limitation of their language. The last control variable for the study at hand is team size. The average number of members in one team is 6.27 ($M = 6.27$, $SD = 4.75$).

5.3 Checking Assumptions

5.3.1 Independence

Observations used to create a dataset must be independent of one another in order to avoid being influenced by others (Pallant 2013). As Pallant (2013) and Field (2013) mention, independence could often be an issue in circumstances where

participants are involved in group-work, especially where they are engaged in a form of interaction with each other. At the individual level, it is important to keep in mind that full independence of the data cannot be guaranteed as it was collected by individual observations who may work in the same multicultural teams in MNCs. Therefore, the use of perception-based individual-level data as measures of team-level constructs causes non-independence in the data. To avoid potential bias, the survey was specifically targeted at independent responses, which was one of the reasons why physical distribution of the survey was avoided to allow students to independently think about their own feelings and not to be influenced by peers.

In the meanwhile, in the team-level constructs, the assumption of independence can be met based on the “team name” question in the survey. Thereby, the independence of data can be guaranteed at the team level.

5.3.2 Normal Distribution

Independent, dependent and moderating variables were checked for normality. A data set is well modelled when random variables are normally distributed with means centring on zero. Checking for normal distribution involves both graphical methods and numerical methods (See Appendix C). At first, graphical methods including histogram, box plot and normal Q-Q plots have to be inspected. Then numerical methods are executed by measuring skewness and kurtosis and performing Skewness-Kurtosis tests. Variables are normally distributed when histograms mirror an inverted U-shape centred on zero, when skewness is zero and kurtosis is exactly three, and Skewness-Kurtosis tests remain insignificant ($p > 0.05$ and chi-square is small) so as not to reject the normality of variables.

The histogram for the moderator Cultural Intelligence (CQ) indicates a pile up of scores at the right side of the graph. Skewness of -0.6525916 cements this observation. Values in the Q-Q plot also uncovers a slight deviation from normality with several outliers. Observed values fluctuate in a slight sinus shape curve around the straight line of expected value. Kurtosis of 3.369485 shows a deviation from normality with peaky distribution. As the Skewness-Kurtosis test is significant ($p = 0.0003$) so it rejects the normality of Cultural Intelligence at 0.05 level.

For the independent variable Social Category Similarity (SCS), the histogram and skewness of 0.2121728 indicates a skewness to the right. Highest frequencies are not centred on the mean, but rather more or less evenly distributed throughout the graph. The Q-Q plot reveals a significant deviation from normality as scores fluctuate in a sinus-shaped curve. The Kurtosis score of 1.768964 supports the rather flatter distribution than normality. The Skewness-Kurtosis test is statistically significant at 0.05 level with large chi-squared so values of Social Category Similarity is not normally distributed.

The histogram and skewness of -0.1893116 for the predictor Work Similarity (WS) reveal a rather close to normal distribution. Highest frequencies are mostly centred on the mean. The Q-Q plot reveals several outliers, but the majority of scores indeed centre on the straight line of expected value. The distribution is rather flatter than normal distribution with the kurtosis score of 2.608714. With an insignificant Skewness-Kurtosis test ($p = 0.2097$) at 0.05 significance level, Work Similarity is evidently normally distributed.

The histogram for the predictor Value Similarity (VS) reveals a large pile-up of scores at the right hand side of the graph. The skewness of -0.7319282 also reveals the skewness to the left of scores. Values in the Q-Q plot also follow a sinus-shaped curve, which deviates significantly from the proposed straight line with several outliers. The kurtosis of 3.374076 indicate a slight deviation from normality and a slightly peakier distribution than normality. As the Skewness-Kurtosis test ($p = 0.0001$) is extremely significant, it leaves no doubt that value similarity indeed deviates from normality.

For the outcome variable Team Performance (TP), the histogram shows a pile-up of scores to the right hand side with the highest frequencies being not centred on the mean. The skewness of -0.6974583 cements this observation. The Q-Q plot reveals a significant deviation from normality as scores fluctuate in a sinus-shaped curve with one outlier to the left side of the proposed straight line. With the kurtosis of 2.870818, the distribution is slightly flatter than normality and shows a slight deviation. The Skewness-Kurtosis test ($p = 0.0003$) reveals that TP scores indeed deviate from normal distribution.

5.3.3 Homoscedasticity

Homoscedasticity called homogeneity of variances means that predictor's residuals are the same at each predictor's level (Field 2013). In a linear regression model, heteroscedasticity makes significance test and confidence intervals invalid (Field 2013). In Appendix C, standardized predicted values are plotted against standardized residuals, which shows evenly and randomly dispersed. Also, the skewness of 0.0176704 and kurtosis of 3.349447 reveals a close to normal distribution as well as the Skewness-Kurtosis test is insignificant ($p = 0.4831$) at 0.05 significance level. This means that homoscedasticity is most likely met.

5.3.4 Linearity

The relationship between predictors and the moderator with the outcome variable being assumed to be linear (Field 2013). When constructing scatterplots with team performance as the dependent variable, relationship with Value Similarity can be assumed to be highly linear while the relationships with SCS and WS appear to be fairly linear with tendency to be distributed from top left to bottom right for SCS and from bottom left to top right for WS (See Appendix D). This result coincides with correlation coefficients which were found to be non-significant for relationship of team performance with SCS and WS. Lack of linearity complements theory in the sense that social category diversity is predicted to have the least potential for performance improvement (Jehn, Northcraft and Neale 1999). Furthermore, linearity between moderator CQ and dependent variable team performance has to be checked with a high degree of linearity.

5.4 Statistical techniques to test hypotheses

The statistical methods used to test the model and hypotheses in this thesis are correlation analysis and regression analysis. In detail, to determine whether or not CQ moderates the relationship between cultural diversity and team performance, hierarchical multiple regression was used to assess the effects of a moderating variable (Baron, Kenny and Reis 1986). To test moderation, we will in particular be looking at predictor, moderator and interaction terms between cultural diversity and CQ and whether or not such effects are significant in predicting team performance. Firstly, all control variables and similarity constructs (individual and joint similarity constructs) were included in step one and two. Then, CQ was

added in the next step and both effects and the general model (R^2) should be significant. Step four was respectively complemented by the interaction terms between social category similarity and CQ, work similarity and CQ, and value similarity and CQ individually and jointly. Then, we checked for a significant R^2 change as well as a significant effect by the new interaction term. If both are significant, then moderation is occurring (Acock 2012). Meanwhile, to test the effect of CQ on team performance, we used multiple regression analysis.

6. Results

This section summarizes the results from the present research including correlations between variables, effects of cultural diversity on team performance, Cultural Intelligence as a moderating effect and effects of Cultural Intelligence on team performance. All the results are presented below at the individual level of data collected while the group level with the same tested results presented in the Appendix H.

6.1. Correlations between variables in the study

In order to test for statistical relationships between constructs, bivariate correlation, referring to the correlation between two variables, was measured using the Pearson correlation coefficient r (Pallant 2013). Table 3 below presents the significant correlations between independent variables and control variables, correlations amongst independent variables and correlations with the dependent variable that yielded significant results in the multiple regression analysis.

CQ was significantly correlated with nationality ($r = 0.2252$, $p < 0.001$), business experience ($r = 0.3072$, $p < 0.001$), Living abroad ($r = -0.3487$, $p < 0.001$), language barrier ($r = -0.1970$, $p < 0.01$), social category similarity ($r = -0.2803$, $p < 0.001$), value similarity ($r = 0.5328$, $p < 0.001$), team performance ($r = 0.5568$, $p < 0.001$). Putting the four facets of CQ under the microscope, we found that CQ is positively associated with motivational CQ (MOT) ($r = 0.8319$, $p < 0.001$), cognitive CQ (COG) ($r = 0.8731$, $p < 0.001$), meta-cognitive CQ (MC) ($r = 0.8923$, $p < 0.001$), and behavioural CQ (BEH) ($r = 0.8929$, $p < 0.001$). However, the lack of significant correlation between *CQ* and work similarity

(WS) is interesting to observe, given the fact that the value diversity significantly correlated with *CQ*.

Work Style Similarity was significantly correlated with social category similarity ($r = 0.4480$, $p < 0.001$), value similarity ($r = 0.2573$, $p < 0.0001$), team performance ($r = 0.2685$, $p < 0.001$). The correlation between Work Similarity and team performance can be explained that people who are sharing similar work styles and ethics seem to enhance the effectiveness of the team performance.

Social Category Similarity was significantly correlated with nationality ($r = -0.2952$, $p < 0.001$), living abroad ($r = 0.2901$, $p < 0.001$), work style similarity ($r = 0.4480$, $p < 0.001$), value similarity ($r = -0.2378$, $p < 0.001$), team performance ($r = -0.2219$, $p < 0.01$), cultural intelligent ($r = -0.2803$, $p < 0.001$)

Value similarity was significantly correlated with business experience ($r = 0.2094$, $p < 0.01$), Cultural Intelligent ($r = 0.5328$, $p < 0.001$), social category similarity ($r = -0.2378$, $p < 0.001$), team performance ($r = 0.7062$, $p < 0.001$)

Team performance was significantly correlated with nationality ($r = 0.1657$, $p < 0.01$), business experience ($r = 0.2469$, $p < 0.001$), *CQ* ($r = 0.5568$, $p < 0.001$), social category similarity ($r = -0.2219$, $p < 0.01$), work style similarity ($r = 0.2685$, $p < 0.001$), value similarity ($r = 0.7062$, $p < 0.001$). The large, significant and positive correlation between team performance and value similarity offers the first support for Hypothesis 1 which predicted that team had different work values, goals and missions would negatively affect team performance. Moreover, higher levels of *CQ* were associated with better team performance. Thus, the strong and positive correlation ($r = 0.5908$, $p < 0.001$) between team performance and *CQ* provides more evidence concerning Hypothesis 2 and 3. There were no indications of multicollinearity since correlations between predictors were far below the required threshold of 0.9 (Pallant 2013) for multicollinearity.

Table 3 Mean, standard deviation, correlation, and reliability.

Variable	Mean	S.D.	1-1	1-2	1-3	1-4	1-5	1-6	2	2-1	2-2	2-3	2-4	3-1	3-2	3-3	4
1. Control Variables																	
1-1 Nationality [†]	1.43	0.68	N.A.														
1-2 Gender ^{††}	1.60	0.49	-0.29***	N.A.													
1-3 Business experience ^{†††}	1.37	0.64	0.32***	-0.21**	N.A.												
1-4 Size [‡]	6.27	4.75	-0.04	-0.07	0.07	N.A.											
1-5 Living abroad ^{‡‡}	1.46	0.50	-0.41***	0.19**	-0.27***	-0.07	N.A.										
1-6 Language barriers ^{‡‡‡}	2.95	0.69	-0.06	0.05	-0.14*	0.09	0.08	N.A.									
2. Cultural Intelligence																	
2-1 Motivational CQ	26.90	5.11	0.23***	-0.16*	0.31***	0.03	-0.35***	-0.20**	(0.87)								
2-2 Cognitive CQ	26.71	7.12	0.21**	-0.17*	0.26***	0.08	-0.39***	-0.17**	0.87***	0.64***	(0.91)						
2-3 Metacognitive CQ	24.46	5.09	0.14*	-0.08	0.25***	0.00	-0.26***	-0.21**	0.89***	0.68***	0.72***	(0.92)					
2-4 Behavioral CQ	25.92	6.10	0.18**	-0.17*	0.26***	0.03	-0.22***	-0.10	0.83***	0.58***	0.57***	0.69***	(0.92)				
3. Cultural Diversity																	
3-1 Social Category Similarity	11.44	5.99	-0.30***	0.12 ⁺	-0.16*	0.05	0.29***	0.01	-0.28***	-0.28***	-0.28***	-0.20**	-0.20**	(0.91)			
3-2 Work Similarity	21.34	5.39	-0.07	-0.04	-0.01	0.02	0.09	-0.10	0.09	0.06	0.11 ⁺	0.02	0.10	0.45***	(0.79)		
3-3 Value Similarity	24.19	4.63	0.12 ⁺	-0.09	0.21**	-0.1	-0.17**	-0.01	0.53***	0.49***	0.49***	0.43***	0.41***	-0.24***	0.25***	(0.87)	
4. Team performance																	
4. Team performance	12.70	2.17	0.17*	-0.03	0.25***	-0.07	-0.14*	-0.04	0.56***	0.54***	0.48***	0.48***	0.42***	-0.22***	0.27***	0.71***	(0.91)

Two-tailed test. ⁺ p < 0.1 *p < 0.05 **p < 0.01 ***p < 0.001. N = 227

Numbers in parentheses represents Cronbach's alpha value

[†] 1 = Vietnam, 2 = Other Asian countries, 3 = Other countries

^{††} 1 = Male, 2 = Female

^{†††} 1 = 1-5 years, 2 = 5-10 years, 3 = 10-20 years, 4 = more than 20 years

[‡] Number of team members

^{‡‡} 1 = Have lived in a foreign country for longer than six months; 2 = Have never lived in a foreign country for longer than six months

^{‡‡‡} 1 = Have never experienced interaction difficulties, 2 = Have seldom experienced interaction difficulties, 3 = Have sometimes experienced interaction difficulties, 4 = Have always experienced interaction difficulties

6.2 Effects of cultural diversity on team performance

Table 4 Result of regression analysis for cultural diversity and team performance.

Variables	Performance				
	Model 1	Model 2	Model 3	Model 4	Model 5
	Coefficient				
Nationality [†]	0.1506	0.3073	0.2527	0.1084	0.2016
Gender ^{††}	0.1938	0.2544	0.2775	0.3392	0.3305
Business experience ^{†††}	0.7274**	0.7508**	0.3297 ⁺	0.6852**	0.3522*
Size [‡]	-0.0328	-0.0421	0.0006	-0.0323	-0.0019
Living abroad ^{‡‡}	-0.0988	-0.3547	0.1457	-0.0775	0.159
Language barriers ^{‡‡‡}	0.0074	0.1217	-0.0598	0.1353	-0.0044
Cultural Diversity					
Social Category Similarity	-0.0611*			-0.1390***	-0.052*
Work Similarity		0.1176***		0.1831***	0.0738**
Value Similarity			0.3216***		0.2847***
R ²	0.1044	0.1629	0.5164	0.2658	0.5397
Adjusted R ²	0.0758	0.1361	0.5009	0.2388	0.5206
F	3.65***	6.09***	33.40***	9.86***	28.27***

Two-tailed test. ⁺ p < 0.1 *p < 0.05 **p < 0.01 ***p < 0.001. N = 227

[†] 1 = Vietnam, 2 = Other Asian countries, 3 = Other countries

^{††} 1 = Male, 2 = Female

^{†††} 1 = 1-5 years, 2 = 5-10 years, 3 = 10-20 years, 4 = more than 20 years

[‡] Number of team members

^{‡‡} 1 = Have lived in a foreign country for longer than six months; 2 = Have never lived in a foreign country for longer than six months

^{‡‡‡} 1 = Have never experienced interaction difficulties, 2 = Have seldom experienced interaction difficulties, 3 = Have sometimes experienced interaction difficulties, 4 = Have always experienced interaction difficulties

Hypothesis 1 states that cultural diversity negatively affects MCTs' performance. As can be seen from the Table 4, the results were designated as Model 1- Model 5. We used the control variables: nationality, gender, business experience, size, living abroad, language barriers. From the results, nationality, business experience and gender are positively correlated with team performance in all models. Model one, two, three present the individual effects of similarity constructs on team performance while model four and five exhibit the joint effects of SCS and WS,

and SCS, WS and VS, respectively. Two similarity constructs (WS, VS) out of three have significant positive effects on team performance with value similarity explaining 51.64% of variance, more significant than and work similarity (16.29%) while SCS shows negative impacts on team performance. Model four and five add WS and then VS from the Model one with SCS. It is clearly shown in Model five that value similarity is the most significant factor in predicting team performance ($\beta^{VS} = 0.2847$, $p < 0.001$) whereas social category similarity and work similarity become insignificant ($\beta^{SCS} = -0.052$, $p < 0.05$; $\beta^{WS} = 0.0738$, $p < 0.01$) and the change in R^2 from Model four to Model five is significant (R^2 change = 0.2818). Compared to results in Appendix H1, the result at group level is the same to that at individual level. The results provide partial support for Hypothesis 1, suggesting that cultural diversity has negative effects on performance of MCTs. Thus, hypothesis 1 is supported. However, the effect of Social Category Similarity is insignificant with $\beta < 0$, thus, Hypothesis 1a that surface-level diversity negatively affects MCTs' performance is not supported. In contrast, Hypothesis 1b is also supported with value similarity explaining more of variance than work similarity. In other words, respondents with higher level of value diversity perceived lower level of team performance than those in rather homogeneous teams.

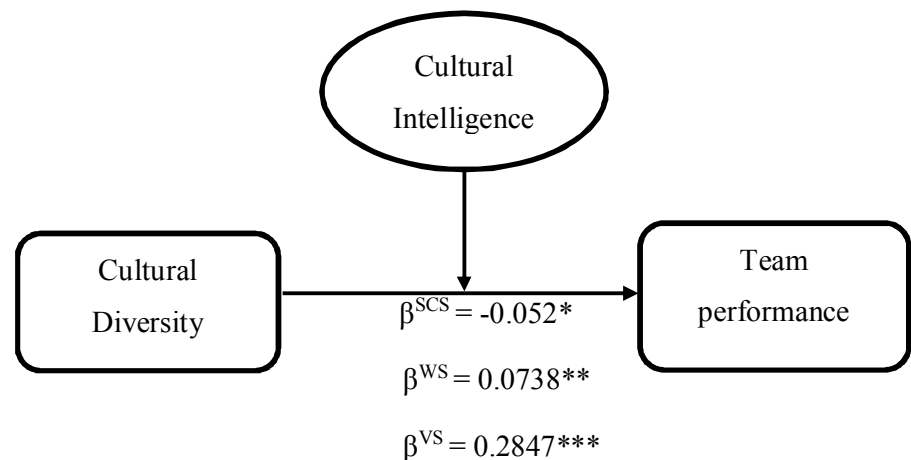


Figure 7 This model shows that Hypothesis 1b is supported, where $\beta^{WS} = 0.0738$, $p < 0.01$ and $\beta^{VS} = 0.2847$, $p < 0.001$, while Hypothesis 1a is not supported, where $\beta^{SCS} = -0.052$, $p < 0.5$.

6.3 Cultural Intelligence as a moderator of the relationship between cultural diversity and team performance

Hypothesis 2 examines the moderating effect of Cultural Intelligence on the relationship between cultural diversity and team performance. The results are exhibited in Table 5 and Figure 8 and Appendix G. The first three models demonstrate the individual effects of similarity constructs on team performance with its interaction with Cultural Intelligence and model four adding all similarity constructs. Although all the four models was significant as a whole ($F^{CQSCS} (9, 217) = 13.41$, $F^{CQWS} (9, 217) = 17.82$, $F^{CQVS} (9, 217) = 30.90$, $F (13,213) = 22.96$ $p < 0.001$), the interaction term did not yield significant results in all models. All its interaction coefficients and effects were small and insignificant ($\beta^{CQSCS} = -0.0017$, $p < 0.1$, significant results in all models. All its interaction coefficients and effects were small and insignificant ($\beta^{CQSCS} = -0.0017$, $p < 0.1$, R^2 Change = 0.0091), ($\beta^{CQWS} = -0.0034$, $p < 0.01$, R^2 Change = 0.0271), ($\beta^{CQVS} = -0.0009$, R^2 Change = 0.002), ($\beta^{CQSCS} = 0.0005$, $\beta^{CQWS} = -0.0015$, $\beta^{CQVS} = 0.0001$, R^2 Change = 0.0035). Hence, results reveal that Cultural Intelligence plays no important role in the negative effect of cultural diversity on team performance. Thus, Hypothesis 2 cannot be supported. The same results are also presented in Appendix H2 at the team level.

Table 5 Results of regression analysis of moderating role of Cultural Intelligence.

Variables	Performance			
	Model 1	Model 2	Model 3	Model 4
	Coefficient			
<i>Controls</i>				
Nationality [†]	0.1704	0.3086	0.2564	0.2153
Gender ^{††}	0.3175	0.2837	0.3037	0.3319
Business experience ^{†††}	0.3449 ⁺	0.3172	0.2498	0.2304
Size [‡]	-0.0368	-0.0339	-0.0075	-0.0079
Living abroad ^{‡‡}	0.4382	0.2508	0.3742 ⁺	0.3496
Language barriers ^{‡‡‡}	0.2287	0.2217	0.0805	0.0917
<i>Main Effects</i>				
Cultural Diversity				
Social Category Similarity	0.1534			-0.0902
Work Similarity		0.4359***		0.2264 ⁺
Value Similarity			0.3538***	0.2077 ⁺
Cultural Intelligence	0.079***	0.1271***	0.0498*	0.0515*
<i>Interaction Effects</i>				
CQSCS	-0.0017 ⁺			0.0005
CQWS		-0.0034**		-0.0015
CQVS			-0.0009	0.0001
R ²	0.3574	0.4250	0.5617	0.5835
Adjusted R ²	0.3307	0.4011	0.5435	0.5581
F	13.41***	17.82***	30.90***	22.96***

Two-tailed test. ⁺ p < 0.1 *p < 0.05 **p < 0.01 ***p < 0.001. N = 227

[†] 1 = Vietnam, 2 = Other Asian countries, 3 = Other countries

^{††} 1 = Male, 2 = Female

^{†††} 1 = 1-5 years, 2 = 5-10 years, 3 = 10-20 years, 4 = more than 20 years

[‡] Number of team members

^{‡‡} 1 = Have lived in a foreign country for longer than six months; 2 = Have never lived in a foreign country for longer than six months

^{‡‡‡} 1 = Have never experienced interaction difficulties, 2 = Have seldom experienced interaction difficulties, 3 = Have sometimes experienced interaction difficulties, 4 = Have always experienced interaction difficulties

CQ: Cultural Intelligence

CQSCS: Cultural Intelligence x Social Category Similarity

CQWS: Cultural Intelligence x Work Similarity

CQVS: Cultural Intelligence x Value Similarity

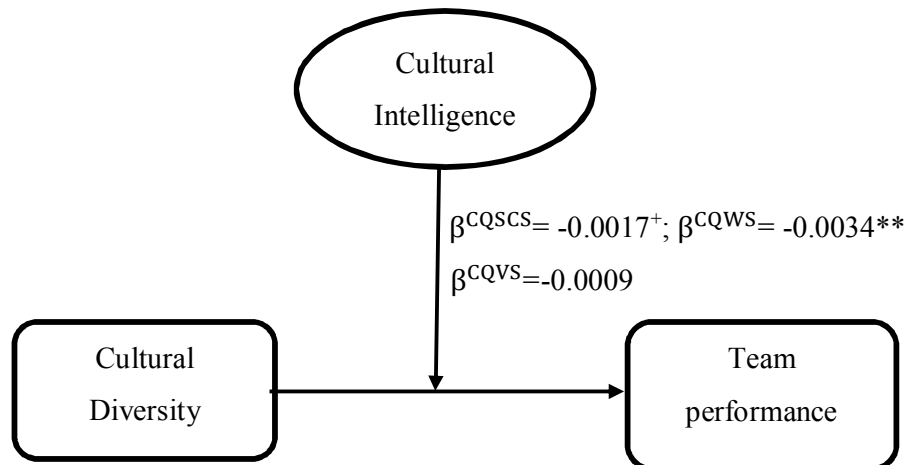


Figure 8 Illustration of the moderation effect. Hypothesis 2 is not supported, where all the interaction terms between constructs of cultural diversity and Cultural Intelligence are insignificant, where $\beta^{CQSCS} = -0.0017$, $p < 0.1$; $\beta^{CQWS} = -0.0034$, $p < 0.5$; $\beta^{CQVS} = -0.0009$.

6.4 Effects of Cultural Intelligence on team performance

Table 6 and Figure 9 illustrates the results of regressions. Table 6 through seven models test the effects of four facets of CQ on team performance with the control variable. Model 4, 5, 6 and 7 in Table 6, which test the effect of each facets of CQ on team performance, reveal interesting results. Firstly, four facets of CQ significantly enhance team performance. Secondly, the fact that MOT explains 31.93% of variance of team performance relative to 27.26% for COG, 27% for MC and 21.38% for BEH makes MOT the most important predictor for team performance. Models 3 in the table also confirms that MOT is indeed the most important predictor of CQ in the effect on TP, and MC, COG, BEH become insignificant in this model with the most explanatory power than the others (36.43%). Model 2 shows the effect of aggregated average CQ on team performance, although not being a very significant effect. In conclusion, Hypothesis 3 indicating that CQ positively impacts MCTs' performance is supported and Hypotheses 3a, 3b, 3c, 3d are also supported.

Table 6 Results of regression analysis for CQ and team performance with control variables.

Variable	Performance						
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
	Coefficient						
Nationality [†]	0.2516	0.1953	0.1703	0.1388	0.2334	0.2683	0.2002
Gender ^{††}	0.1758	0.3045	0.2716	0.2129	0.3077	0.1656	0.3254
Business experience ^{†††}	0.7552**	0.3716 ⁺	0.3648 ⁺	0.4266*	0.5226*	0.4770*	0.5082*
Size [‡]	-0.0380	-0.0411	-0.0385	-0.0316	-0.0497	-0.0363	-0.0393
Living abroad ^{‡‡}	-0.2469	0.4014	0.4488	0.2342	0.4513	0.1754	-0.0313
language barriers ^{‡‡‡}	0.0251	0.2861	0.3224	0.2773	0.2244	0.2699	0.0996
Cultural Intelligence		0.0619***					
Motivational CQ			0.1340***	0.2264***			
Cognitive CQ			0.0599*		0.1500***		
Metacognitive CQ			0.0412			0.1992***	
Behavioral CQ			0.0206				0.1377***
R^2	0.0796	0.3445	0.3643	0.3193	0.2726	0.2700	0.2138
Adjusted R^2	0.0545	0.3235	0.3348	0.2976	0.2493	0.2467	0.1887
F	3.17***	16.44***	12.38***	14.68***	11.72***	11.57***	8.51***
ΔR^2		0.2649	0.0198	0.2397	0.193	0.1904	0.1342
ΔF		13.27	9.21	11.51	8.55	8.40	5.34

Two-tailed test. ⁺ $p < 0.1$ * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$. N = 227

[†] 1 = Vietnam, 2 = Other Asian countries, 3 = Other countries

^{††} 1 = Male, 2 = Female

^{†††} 1 = 1-5 years, 2 = 5-10 years, 3 = 10-20 years, 4 = more than 20 years

[‡] Number of team members

^{‡‡} 1 = Have lived in a foreign country for longer than six months; 2 = Have never lived in a foreign country for longer than six months

^{‡‡‡} 1 = Have never experienced interaction difficulties, 2 = Have seldom experienced interaction difficulties, 3 = Have sometimes experienced interaction difficulties, 4 = Have always experienced interaction difficulties

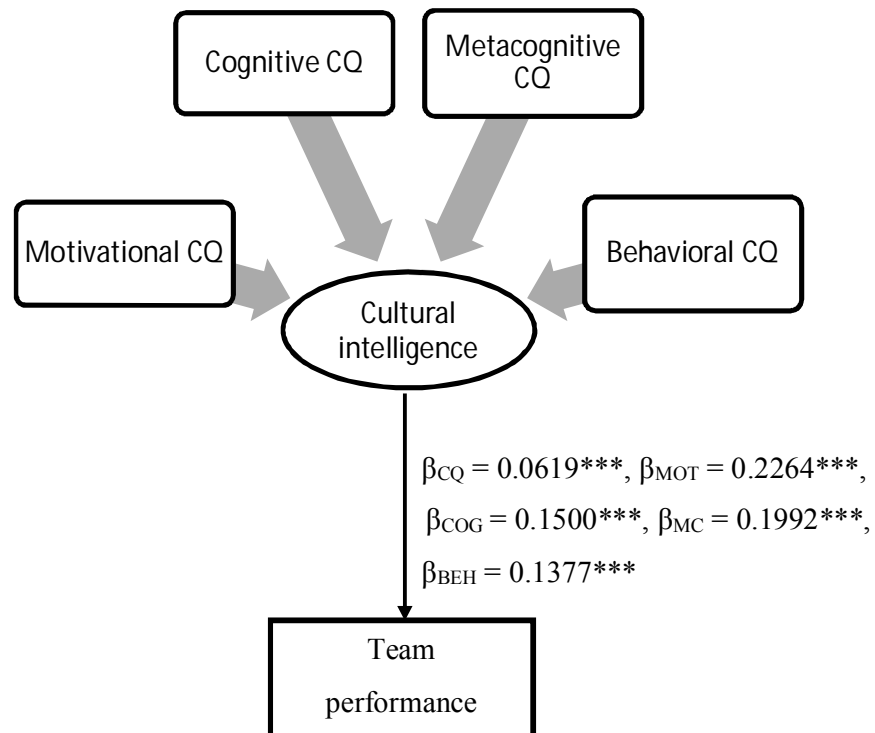


Figure 9 This model shows that Hypothesis 3 is supported, where $\beta^{CQ} = 0.0619$, $p < 0.001$ and Hypotheses 3a-3d are supported with motivational CQ being statistically significant facet in relation to team performance in multicultural teams, where $\beta^{MOT} = 0.2266$, $p < 0.001$.

The summary of hypotheses testing is presented in Table 7 below.

Table 7 Results of hypotheses testing.

	Hypotheses	Hypotheses testing
H1	Cultural diversity negatively affects MCTs' performance	H1 is supported
H1a	Surface-level diversity negatively affects MCTs' performance	H1a is not supported
H1b	Deep-level diversity negatively affects MCTs' MCTs' performance	H1b is supported
H2	CQ moderates the relationship between cultural diversity and MCTs' performance	H2 is not supported
H2a	In MCTs, metacognitive CQ positively moderates the relationship between cultural diversity and team performance.	H2a is not supported
H2b	In MCTs, cognitive CQ positively moderates the relationship between cultural diversity and team performance.	H2b is not supported
H2c	In MCTs, motivational CQ positively moderates the relationship between cultural diversity and team performance.	H2c is not supported
H2d	In MCTs, behavioral CQ positively moderates the relationship between cultural diversity and team performance.	H2d is not supported
H3	CQ positively impacts MCTs' performance	H3 is supported
H3a	Metacognitive CQ positively impacts MCTs' performance	H3a is supported
H3b	Cognitive CQ positively impacts MCTs' performance	H3b is supported
H3c	Motivational CQ positively impacts MCTs' performance	H3c is supported
H3d	Behavioral CQ positively impacts MCTs' performance	H3d is supported

7. Discussion

We aim to give an answer to the question: *What is the influence of cultural diversity on performance of multicultural teams in a Vietnamese setting?* and *What is the influence of team members' Cultural Intelligence on performance of multicultural teams in a Vietnamese context?*

In the following section, the hypotheses and their respective results will be discussed and contributions to the theoretical and empirical analysis are presented if relevant.

7.1 Main findings

The purpose of this thesis is to investigate the two following relationships: the effect of cultural diversity on MCTs' performance with the moderating effect of CQ on this relationship and the impact of CQ on MCTs' performance. Results show that higher degrees of similarity, rather than diversity, are conducive to increase in team performance. While value similarity was found to be the most important enhancement for team performance, work style similarity (WSS) most significantly enhanced team performance. On the contrary, the effect of social category similarity (SCS) on team performance is insignificant. However, CQ was found to have no significant moderating effect on the relationship between cultural diversity and team performance. Moreover, results indicated that CQ positively impacts MCTs' performance. Team members who have higher level of CQ will enhance team performance. And finally, the thesis also found that nationality, gender and business experience also impact team performance in the Vietnamese empirical setting.

7.2 Discussions

Cultural diversity and team performance

The negative impact of cultural diversity on performance follows the footsteps of previous researches (Kirkman and Shapiro 2005; Moon 2013). By confirming this negative relationship, the study at hand substantiates value similarity and work similarity, rather than the social category perspective. According to Günter et al. (2010), cultural diversity impairs team performance because people want to categorize themselves in the group which consists of individuals with similar

attributes. Team members categorize dissimilar people into out-groups, which can lead to discrimination, and corrupt the effective functioning of teams (Günter et al. 2010). The negative effect of diversity also suggests that team members in multicultural teams in Vietnam do not know how to successfully deal with diversity in teams. Given that 46.26% of the respondents have lived abroad for more than six months, it is very likely that they do know how to successfully interact and work with people from different cultures.

The thesis offers another important contribution to diversity research by identifying different effects of 2 types of diversity. The result showed that work style and value diversity affect performance negatively, whereas social category diversity do not have any effect at all. It also supports for the main findings of Jehn, Northcraft and Neale (1999). They found that team members should display low deep-level diversity for a team to be efficient, effective and have high morale. Moreover, work styles and value diversity can increase potential conflict within the team, thus decreasing team performance (Jehn, Northcraft and Neale 1999). On the contrary, Mannix and Neale (2005) found that surface-level social-category differences tend to be more likely to have negative effects on the ability of groups to function effectively while deep-level diversity generated positive effects with respect to team effectiveness. In the Vietnamese context, this finding also reinforces the fact that employees who come from the similar cultural backgrounds are likely to be more effective in teams with each other than those who come from different cultural backgrounds.

Cultural Intelligence, cultural diversity and team performance

Generally, the study is currently the first in testing the moderation effect of Cultural Intelligence on the relationship between cultural diversity and team performance taking both surface-level diversity and deep-level diversity into account. Moon (2013, 2422) confirmed that “CQ attenuates the negative effect of cultural diversity on MCTs’ performance” and “improve the performance at a faster pace than those with lower CQ” based on the surface-level of diversity while the finding for the role of CQ in the Vietnamese context was refuted for some conclusive evidences. Moon (2013) only focused on diversity of culture at the surface level and measured team performance and Cultural Intelligence over a

long period of 15 weeks over three conjunctive tasks. In the meanwhile, the data collected in this survey in the Vietnamese context were collected randomly without knowing exactly how long the team was built, which impaired the results. In case of a team with short time of interaction, it is normal that Cultural Intelligence cannot have immediate influence on performance of a multicultural team and hardly can people in a team understand about their peers to work more effectively to weaken the effects of cultural diversity on team performance. Moreover, the problem may come from the difference in level of analysis that selected measurements rely on with respondents' CQ measured on an individual basis as provided themselves while cultural diversity and team performance being perception-based individual measures for the entire team. Therefore, the issue of this study is carrying out measurement of individually based respondents' CQ to affect the team level performance in culturally diverse teams.

Cultural Intelligence and team performance

Being the first study to investigate about the relationship of Cultural Intelligence and team performance in the Vietnamese setting, this study once again confirmed the positive influence of CQ on team performance ($\beta = 0.0619$, $p < 0.001$), demonstrating the relevance of CQ for MCTs as previous studies (Lee and Sukoco 2010; Chen, Lin and Sawangpattanakul 2011; Chen and Lin 2013; Moon 2013; Buecker et al. 2014). In a practical term, this finding indicates that with a higher level of Cultural Intelligence in the team members of MCTs, performance of teams can be enhanced significantly, applied in Vietnamese multinational companies. In this study, we haven't investigated the change in the linear effect of CQ on team performance overtime as the study carried out by Moon (2013). However, we first used more control variables than size (Moon 2013) and age and foreign experience (Chen, Lin and Sawangpattanakul 2011) in this culturally diverse settings for the relationship between CQ and team performance such as business experience and language barriers.

Among the facets of CQ, the multiple regression analyses show a very interesting finding that motivational CQ is the most significant factor to affect team performance. It can be concluded that motivational CQ mostly saliently explains for the influence of CQ on the performance of MCTs, which is dissimilar to the previous finding by Chen, Lin and Sawangpattanakul (2011) for Phillipine

laborers working in Taiwan's manufacturing industries when all the facets of CQ reached significance status. Recalling motivational CQ, it involves an individual's intrinsic interests and self-efficacy to adjust himself/herself with increased level of confidence in the context of cross culture (Bandura 1986, 2002; Van Dyne, Ang and Koh 2008). Thus, those with high level of motivational CQ are more likely to be ready for challenges in a new environment and make more effort to interact with people from different cultures, leading to better understanding and therefore better performance of the teams.

Those respondents in this study, as described above belong to different cultural groups, mostly from Vietnam with 68.28%, 20.7% from other Asian countries and 11.01% from others countries in the world. As Vietnamese students, we understand that almost all Vietnamese people working for multinational companies have ambitious motivation and energy to work effortlessly and to interact more with people in their company to cooperate with people from different cultures and to get better position at work, gaining better salary.

Moreover, the second highest proportion of other Asian respondents suggest that as coming from closely resembling Asian culture, those people have more attention and power for grasping insignificant difference in the Vietnamese context compared to their own countries, resulting better interaction, better confidence in accomplishing a given task and better team performance.

Furthermore, most of respondents are young with business experience mostly from 1 year to 10 years, which makes them more ambitious and motivated to work in a multicultural team to interact with people from different cultures.

Control variables and team performance

Evaluating the relevant control variables leads to some additional findings in this study. Referring to the analysis (See Table 3), team performance correlates well with nationality and business experience. Moreover, as can be seen from the results of regression analysis on control variables (See Table 4, Table 6), it can be concluded that only three anticipated variables including nationality, gender, business experience show significant strength to predict the team performance. According to Ang et al. (2007), people meet less difficulty in MCTs when they previously worked in international business environment. Our study also consolidates this finding. In the Vietnamese context, business experience has a

strong effect on team performance ($r = 0.2469$, $p < 0.001$ and $\beta = 0.7552$, $p < 0.1$). It is not very surprising that respondents who were exposed to business environments are easy to work in MCTs because they have a high level of Cultural Intelligence (Earley and Ang 2003)

Gender significantly predicts team performance ($\beta = 0.1758$, $p < 0.05$). Meanwhile, the result of this study also found that nationality is significantly related to team performance ($\beta = 0.2516$, $p = 0.292$, $r = 0.1657$, $p < 0.01$). These findings are in line with the previous studies, Williams and O'reily (1998), Moon (2013) and Early and Ang (2003) also showed that people like to work with those having similarities with regard to gender and nationality. Most people in MCTs in Vietnam like to form or work within a team with those who are at the same age and come from the same countries. However, it may lead a personal relationship to obstruct honest interaction and cooperation in a team because emotions are involved.

Nevertheless, this study found that team size, living abroad, and language barriers do not impact MTC's performance in Vietnam. According to Zellmer-Bruhn et al. (2008) and Günter et al. (2010), team size reinforces the negative effect of diversity on team performance. On the contrary, this study follows the result of Moon (2013) that team size do not yield any significant result on team performance (See Table 4, Table 6 and Appendix H).

8. Conclusion

The section presents theoretical and managerial implications of the study, and then continues with limitations and provides suggestions for further studies.

8.1 Theoretical contributions and managerial implications

Theoretical contributions

In terms of theoretical contributions, the study contributes to the literature of Cultural Intelligence, cultural diversity and team performance. Firstly, this study confirms the negative impact of cultural diversity on MCTs' performance. Although there are many researches about this relationship, the main findings are inconsistent (Jehn et al., 1999; Mannix & Neale, 2005). Moreover, this study is one of few studies that measure two levels of cultural diversity including deep-

level diversity and surface-level diversity and their impacts on team performance. Secondly, this study also contributes the CQ literature through examining the relationship between CQ and MCTs' performance at both the individual and group level. The result demonstrates the positive impact of CQ on MCTs' performance. There are few studies researched on CQ at both levels to examine this relationship (Ang et al., 2006, 2007, Moon, 2013); thus, this thesis provides more insights into the importance of CQ and cultural diversity to team performance. Finally, to the best of authors' knowledge, it is one of the very first studies that investigate about the effect of CQ on MCTs' performance in MNCs in Vietnam. There is an increasing demand of researching business knowledge management about Vietnam, thus, the empirical findings offered by this study can be a background and bring a potential support for future researchers.

Managerial implications

Practically, this study has useful implications for international managers to reduce negative effects of cultural diversity on team performance in MNCs in Vietnam. The other corporations that intend to enter in Vietnam business market will also benefit from the current research. Overall, the authors suggest some managerial propositions based on the background of the research findings as follows:

+ When forming a team in MNCs, managers should consider carefully when selecting employees and putting employees who have similar cultural background in the same group in case they prefer that the team performance becomes more efficient and better. It does not mean that managers are suggested not hiring individuals who have different cultural backgrounds but good managers should know how to minimize surface-level diversity in a team. High CQ level can help to increase the performance in MCTs, thus, a test of CQ can be applied for new employees to help the managers understand more clearly about those employees. Furthermore, since the periods of living abroad and business experience revealed influence on team performance, managers can use them as conditions for new employees in recruitment process and especially in selecting appropriate team members in forming a multicultural group.

+ Managers need to develop a strong company culture, define company's goals and consider diversity as a crucial part of corporate culture and identity. Many

managers should provide employees with necessary skills and tools so that they can exploit diversity and make it become a competitive advantage for companies in the long run. Moreover, managers need to divide the role and values of each member in team in particular and in MNCs in general. Then, it is important to make all employees understand about them in order to minimize the value diversity in MCTs.

+ To enhance Cultural Intelligence for each employee, cultural training should be held in MNCs in every month. Furthermore, this provides a chance for all team members to understand more clearly about each other and enhance team spirit. In detail, training must focus on behavioral and motivational facets to improve employees' ability to perform better and be confident in cooperating with others in MCTs. Meanwhile, employees also need to understand cognitive and metacognitive CQ to develop a working knowledge of cross-cultural behavior.

+ In this study, business experience shows a positive impact on MCTs' performance. Thus, multinational corporations can choose some famous universities of economy in Vietnam to become partners and offer both undergraduate and graduate students chances of internship in their company. It is a useful way to screen talented and potential employees, and to motivate them to work and contribute to the development of companies in Vietnam. Students who have attended internship programs accumulate a lot of working experience and cultural understanding in multicultural teams at the workplace. Moreover, by creating more opportunities for students, multinational companies in Vietnam can build a positive image in business environment and attract more people to seek job position in these companies.

8.2 Limitations and future research

The present study is not without limitations. Although attempting to improve existing studies on Cultural Intelligence, cultural diversity and its relationship to team performance, there are still rooms for improvements in the future researches.

The first limitation is that our data were collected through convenience sampling, not random sampling due to limited resources and short time period we had.

Therefore, the study may not be sufficiently representative of the entire population, affecting generalization of the results. Moreover, the sample size is

rather small and we also have difficulties in accessing the whole members in the team for a complete data set for analysis, resulting in a lack of some validity and affecting the result of team level of analysis while the independence of assumption is also violated as the individual level data include several members from the same team. Therefore, future researchers are encouraged to collect data randomly and data from all members of teams to improve generalization of results and control for demographic attributes affecting the relationship among cultural diversity, Cultural Intelligence and team performance other than team size at the team level analysis.

Secondly, our study used cross-sectional research design, that involves analysis of data collected from a population at one specific point in time (Bryman and Bell 2015), making it difficult to conclude causal relationships regarding effects of Cultural Intelligence and cultural diversity on team performance over time. Thus, future researches should use longitudinal designs to examine the change in those relationships and observe employees' improvement rate of team performance over their joint tasks over long time periods of continued interaction and communication.

Another limitation in our study lies in the aggregation of such perception-based constructs designed for individual level as cultural diversity and Cultural Intelligence for the team level of analysis due to insignificant reliability to the efficiency of aggregating items written for one level to the other (Bar-Tal 1990; Klein, Dansereau and Hall 1994). Further studies should examine those constructs at the team level of analysis for their influence on performance of a team.

As a final remark, the investigated multi-cultural teams consist of members from the same country with most of respondents from Vietnam and other Asian countries, influencing the diversity of a team. It is suggested that members in the same country bear similarity in the social category and cultural values comparing to those from other countries (Hofstede 1980). The impacts of cultural diversity on team performance tend to be much stronger in multi-national teams. Therefore, researchers should have a rethought on the composition of a team and extent the geographical scope of the team to be the most effective in inspecting the effects on team performance.

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Appendices

Appendix A The main hypotheses and results of current studies on the influence of CQ on performance of MCTs

<i>Study</i>	<i>Hypothesis</i>	<i>Result</i>
Chen, Lin & Sawangpattanakul (2011)	Direct effect: CQ positively relates to performance. Specifically, cognitive CQ, meta-cognitive CQ, motivational CQ, and behavior CQ positively relate to performance.	CQ was positively related to performance.
Imai & Gelfand, (2010)	Individuals with higher CQ will have higher cooperative motives than individuals with lower CQ.	CQ had a positive correlation with cooperative motives. Individuals who have greater ability in adapting to situations of cultural diversity also tend to want to be- have more cooperatively in negotiations, compared to individuals who have lower ability in adapting to situations of cultural diversity.
Bücker et al. (2014)	The level of CQ among local host country managers in foreign multinationals is positively associated with communication effectiveness The level of CQ among local host managers in foreign MNEs is positively associated with the level of job satisfaction.	CQ relates positively to job satisfaction, communication effectiveness
Chen&Lin (2013)	Hypothesis 2: Metacognitive CQ directly motivates knowledge sharing. Hypothesis 3: Metacognitive CQ indirectly motivates knowledge sharing through the partial mediation of perceived team efficacy. Hypothesis 4: Cognitive CQ directly motivates knowledge sharing. Hypothesis 5: Cognitive CQ indirectly motivates knowledge sharing through the partial mediation of perceived team efficacy. Hypothesis 6: Motivational CQ directly motivates knowledge sharing.	While metacognitive, cognitive, and motivational CQs have direct and positive effects on knowledge sharing, behavioral CQ has no direct influence on knowledge sharing (thus, H2–H4 are supported, but H5 is not supported). Moreover, metacognitive and behavioral CQs have indirect and positive effects on knowledge sharing via the mediation of perceived team efficacy, whereas cognitive and motivational CQs have no indirect effect on knowledge sharing at all (thus, H6 and H9 are supported, but H7 and H8 are not supported).

	<p>Hypothesis 7: Motivational CQ indirectly motivates knowledge sharing through the partial mediation of perceived team efficacy.</p> <p>Hypothesis 8: Behavioral CQ directly motivates knowledge sharing.</p> <p>Hypothesis 9: Behavioral CQ indirectly motivates knowledge sharing through the partial mediation of perceived team efficacy</p>	
Groves &Feyerherm (2011)	<p><i>Hypothesis 1a:</i> Team cultural diversity will moderate the relationship between leader cultural intelligence and follower ratings of leader performance. The leader cultural intelligence leader performance relationship will be stronger in teams with greater cultural diversity.</p> <p><i>Hypothesis 1b:</i> For culturally diverse teams, leader cultural intelligence will account for unique effects on follower ratings of leader performance beyond the effects of leader emotional intelligence.</p> <p><i>Hypothesis 2a:</i> Team cultural diversity will moderate the relationship between leader cultural intelligence and follower ratings of team performance. The leader cultural intelligence team-performance relationship will be stronger in teams with greater cultural diversity.</p> <p><i>Hypothesis 2b:</i> For culturally diverse teams, leader cultural intelligence will account for unique effects on follower ratings of team performance beyond the effects of leader emotional intelligence.</p>	<p>Leaders with greater CQ demonstrate higher leader performance on culturally diverse work teams compared to culturally homogeneous work teams. These results also indicate that leader CQ explains unique variance in leader performance on diverse teams beyond the effects of leader EQ. Overall, these results provide support for Hypotheses 1a and 1b.</p> <p>Leaders with higher CQ facilitated greater team performance on culturally diverse work teams compared with culturally homogeneous work teams. These results also indicate that leader CQ explains unique variance in team performance on culturally diverse teams beyond the effects of leader EQ. Overall, these results provide support for Hypotheses 2a and 2b.</p>
Adair, Hideg & Spence, (2013)	<p><i>Hypothesis 1 (H1):</i> Motivational CQ will lead to a greater degree of shared values in MCTs but to a lesser degree of shared values in culturally homogeneous teams.</p> <p><i>Hypothesis 2 (H2):</i> Behavioral CQ will lead to a greater degree of shared values in MCTs but to a lesser degree of shared values in culturally homogeneous teams.</p>	<p>To interpret the interaction, we graphed the results at high and low levels of motivational CQ, behavioral CQ, the effect at high and low levels of metacognitive CQ respectively</p> <p>Consistent with our prediction, a simple slope analysis revealed that culturally homogeneous teams were less likely to develop shared values when team motivational CQ was high. However,</p>

	<p><i>Hypothesis 3 (H3):</i> Metacognitive CQ will lead to a greater degree of shared values in MCTs but to a lesser degree of shared values in culturally homogeneous teams.</p>	<p>contrary to our predictions, shared values of culturally heterogeneous teams were not influenced by motivational CQ. Thus, H1 was partially supported.</p> <p>Consistent with our prediction, a simple slope analysis revealed that culturally heterogeneous teams were more likely to develop shared values when team behavioral CQ was high. However, contrary to our predictions, shared values of culturally homogeneous teams were not influenced by behavioral CQ. Thus, H2 was partially supported.</p> <p>The pattern of interactions was as predicted for culturally homogeneous and heterogeneous groups. However, simple slope analyses were only marginally significant. Thus, H3 was partially supported.</p>
Moon (2013)	<p><i>Hypothesis 1a.</i> The performance of a team with low cultural diversity will initially perform better than a team with high cultural diversity.</p> <p><i>Hypothesis 1b.</i> The performance rate of a team with high cultural diversity will improve more quickly than the performance rate of a team with low cultural diversity over time.</p> <p><i>Hypothesis 2a.</i> MCTs with a higher level of CQ will initially perform better than MCTs with lower levels of CQ.</p> <p><i>Hypothesis 2b.</i> MCTs with a higher level of CQ will improve performance more quickly than MCTs with lower levels of CQ.</p> <p><i>Hypothesis 3.</i> CQ will moderate the relationship between cultural diversity and MCT's performance. That is, a higher level of team CQ will significantly weaken the negative effect of cultural diversity on initial MCT's performance, and accelerate the rate of improvement in MCT's</p>	<p>This study concludes that teams differ in both their initial performance levels and their performance trends (rate of changes in performance).</p> <p>This finding provides support for Hypothesis 1a. In addition, the result supports Hypothesis 2a.</p> <p>In other words, teams with a higher level of cultural diversity and CQ improved more quickly than teams with a lower level of cultural diversity and CQ. This finding offers support for Hypothesis 1b. In addition, the results have supported Hypothesis 2b</p> <p>These plots of interaction indicate that higher levels of team CQ is more likely to diminish the adverse effect of cultural diversity on initial team performance, as well as the rate of improvement in performance for both teams over a 15-week period, those with high cultural diversity and with low cultural diversity, supporting Hypothesis 3</p>

	performance over 15 weeks.	
Lee & Sukoco (2010)	Hypothesis 1: Expatriate cultural intelligence has a significant and positive influence on (a) expatriate adjustment, (b) cultural effectiveness, and (c) expatriate performance.	<p>The first model is developed to test the effect of CQ on cultural adjustment and performance.</p> <p>The results indicate that CQ has a positive and significant effect on cultural adjustment. Interestingly, CQ has no significant effect on expatriate performance, and thus Hypothesis 1 is only partially supported.</p>
Duff, Tahbaz & Chan, 2012	<p>Hypothesis 1a: Metacognitive intelligence is positively related to task performance.</p> <p>Hypothesis 1b: Behavioural intelligence is positively related to task performance.</p>	<p>Only behavioural intelligence was significantly related to task performance, lending support only to Hypothesis 1b. Hypothesis 2, which suggested that openness was positively related to task performance, was not supported.</p>

Appendix B Measurement Scales & The full questionnaire
Appendix B1 Measurement Scales

Variable	Scale Items	Cronbach's Alpha
Cultural Diversity		$\alpha=0.9243$
Social Category Similarity ⁷		$\alpha=0.786$
SCS1	Members of my team came from common cultural backgrounds.	
SCS2	Members of my team were from the same country.	
SCS3	Members of my team shared similar ethnic backgrounds.	
Work Similarity ⁸		$\alpha=0.941$
WS1	Members of my team shared a similar work ethic.	
WS2	Members of my team shared similar work habits.	
WS3	Members of my team had similar communication styles.	
WS4	Members of my team had similar interaction styles.	
WS5	Members of my team had similar personalities.	
Value Similarity ⁹		$\alpha=0.906$
VS1	The values of all group members were similar.	
VS2	The team as a whole had similar work values.	
VS3	The team as a whole had similar goals.	
VS4	Team members had strongly held beliefs about what was important within the team.	
VS5	Team members had similar goals.	
VS6	All members agreed on what was important to the team.	
Team performance ¹⁰	Our work unit is very competent. Our work unit gets the work done very effectively. Our work unit has performed the job well.	$\alpha= 0.91$

⁷ Zellmer – Bruhn et al. (2008)

⁸Zellmer – Bruhn et al. (2008)

⁹Jehn et al. (1999)

¹⁰Heilman, Block and Lucas (1992)

Appendix B2 The Cultural Intelligence Scale (CQS)¹¹

<i>Variable</i>	<i>Scale Items</i>	<i>Cronbach's Alpha</i>
Cultural Intelligence		$\alpha = 0.90$
Metacognitive CQ		$\alpha = 0.88$
MC1	I am conscious of the cultural knowledge I use when interacting with people with different cultural backgrounds.	
MC2	I adjust my cultural knowledge as I interact with people from a culture that is unfamiliar to me.	
MC3	I am conscious of the cultural knowledge I apply to cross-cultural interactions.	
MC4	I check the accuracy of my cultural knowledge as I interact with people from different cultures.	
Cognitive CQ		$\alpha = 0.92$
COG1	I know the legal and economic system of other cultures.	
COG2	I know the rules (e.g., vocabulary, grammar) of other languages.	
COG3	I know the cultural values and religious beliefs of other cultures.	
COG4	I know the marriage systems of other cultures.	
COG5	I know the arts and crafts of other cultures.	
COG6	I know the rules for expressing non-verbal behaviors in other cultures.	
Motivational CQ		$\alpha = 0.85$
MOT1	I enjoy interacting with people from different cultures.	
MOT2	I am confident that I can socialize with locals in a culture that is unfamiliar to me.	
MOT3	I am sure I can deal with the stresses of adjusting to a culture that is new to me.	
MOT4	I enjoy living in cultures that are unfamiliar to me.	
MOT5	I am confident that I can get accustomed to the shopping condition in a different culture.	
Behavioral CQ		$\alpha = 0.86$
BEH1	I change my verbal behavior (e.g., accent, tone) when a cross-cultural interaction requires it.	
BEH2	I use pause and silence differently to suit different cross-cultural situations.	
BEH3	I vary the rate of my speaking when a cross-cultural situation requires it.	
BEH4	I change my non-verbal behavior when a cross-cultural situation requires it.	
BEH5	I alter my facial expression when a cross-cultural situation requires it.	

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¹¹Ang et al.(2007)

Appendix B3 The full survey in English for international expats

This survey includes the information letter, Demographics and the main question part in Cultural Intelligence, Cultural Diversity and Team performance

INFORMATION LETTER**Dear participants,**

We are two master students at **BI Norwegian Business School**, conducting our **master thesis**.

Thank you for taking time to answer the questionnaire. Through your answer, we expect this research to contribute to increased insight in multicultural teams and exploring the link between cultural intelligence and performance in multicultural teams of multinational companies in Vietnam. Your answer will be used for an analysis in our master thesis.

Procedures

You will be asked to answer all questions in about 10 minutes. Please read the instructions for each question carefully before answering. There are no right or wrong answers. Provide answers that reflect who you are and your opinion in order for us to gain better insight into the field of research.

Confidentiality

We promise that all data obtained from participants will be kept confidential and will be anonymous before reporting. All questionnaires will be concealed, and no one other than the researchers listed below will have access to them. The data will be stored in Qualtrics database until it has been deleted.

Participation

Participation in this research study is completely voluntary.

Please be sure to make a team name in question 5 by following the structure: The first letter of company's name_The name of your department_The specific name or the number of your team, e.g.:

Procter&GambleCompany_SalesDepartment_Team 1 (or Export Team)

-> P&G_SALES_1 or P&G_SALES_EXPORT

Questions about the research

If you have questions regarding this study, you may contact:

Thao Mai Thanh Le at Thao.M.Le@student.bi.no or thaoimt@gmail.com, or

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Please let us know if you would like us to send you a copy of our research findings at the end of 2016 and we would be happy to do so.

Thank you again for your participation!

DEMOGRAPHICS

Q1 Nationality

- Vietnam (1)
- Other Asian countries (2)
- Other countries (3)

Q2 Gender

- Male (1)
- Female (2)

Q3 Number of years of business experience

- 1 – 5 years (1)
- 5 – 10 years (2)
- 10 – 20 years (3)
- More than 20 years (4)

Q4 Team size:.....(The average number of team members)

Q5 Team name:.....(in CAPITAL)

Please make the team name in this way:

The first letter of company's name_The name of your department_The specific name or the number of your team, e.g.:

Procter&GambleCompany_SalesDepartment_Team 1 (or Export Team)

→ P&G_SALES_1 or P&G_SALES_EXPORT

Q6 Have you lived in a foreign country for longer than six months?

- Yes
- No

Q7 To what extent have you experienced interaction difficulties based on language barriers?

- Never (1)
- Seldom (2)
- Sometimes (3)
- Always (4)

QUESTIONNAIRE ITEMS

Please read each statement and select the response that best describes your capabilities. Select the answer that BEST describes you AS YOU REALLY ARE (1=Strongly disagree, 7=Strongly agree) or (1=Strongly disagree, 5=Strongly agree)

Q8 I enjoy interacting with people from different cultures.

- 1 (Strongly disagree)
- 2
- 3
- 4
- 5
- 6
- 7 (Strongly agree)

Q9 I am confident that I can socialize with locals in a culture that is unfamiliar to me.

- 1 (Strongly disagree)
- 2
- 3
- 4
- 5
- 6
- 7 (Strongly agree)

Q10 I am sure I can deal with the stresses of adjusting to a culture that is new to me.

- 1 (Strongly disagree)
- 2
- 3
- 4
- 5
- 6
- 7 (Strongly agree)

Q11 I enjoy living in cultures that are unfamiliar to me.

- 1 (Strongly disagree)
- 2
- 3
- 4
- 5
- 6
- 7 (Strongly agree)

Q12 I am confident that I can get accustomed to the shopping conditions in a different culture.

- 1 (Strongly disagree)
- 2
- 3
- 4
- 5
- 6
- 7 (Strongly agree)

Q13 I know the legal and economic systems of other cultures.

- 1 (Strongly disagree)
- 2
- 3
- 4
- 5
- 6
- 7 (Strongly agree)

Q14 I know the rules (e.g., vocabulary, grammar) of other languages.

- 1 (Strongly disagree)
- 2
- 3
- 4
- 5
- 6
- 7 (Strongly agree)

Q15 I know the cultural values and religious beliefs of other cultures.

- 1 (Strongly disagree)
- 2
- 3
- 4
- 5
- 6
- 7 (Strongly agree)

Q16 I know the marriage systems of other cultures.

- 1 (Strongly disagree)
- 2
- 3
- 4
- 5
- 6
- 7 (Strongly agree)

Q17 I know the arts and crafts of other cultures.

- 1 (Strongly disagree)
- 2
- 3
- 4
- 5
- 6
- 7 (Strongly agree)

Q18 I know the rules for expressing non-verbal behaviors in other cultures.

- 1 (Strongly disagree)
- 2
- 3
- 4
- 5
- 6
- 7 (Strongly agree)

Q19 I am conscious of the cultural knowledge I use when interacting with people with different cultural backgrounds.

- 1 (Strongly disagree)
- 2
- 3
- 4
- 5
- 6
- 7 (Strongly agree)

Q20 I adjust my cultural knowledge as I interact with people from a culture that is unfamiliar to me.

- 1 (Strongly disagree)
- 2
- 3
- 4
- 5
- 6
- 7 (Strongly agree)

Q21 I am conscious of the cultural knowledge I apply to cross-cultural interactions.

- 1 (Strongly disagree)
- 2
- 3
- 4
- 5
- 6
- 7 (Strongly agree)

Q22 I check the accuracy of my cultural knowledge as I interact with people from different cultures.

- 1 (Strongly disagree)
- 2
- 3
- 4

- 5
- 6
- 7 (Strongly agree)

Q23 I change my verbal behavior (e.g., accent, tone) when a cross-cultural interaction requires it.

- 1 (Strongly disagree)
- 2
- 3
- 4
- 5
- 6
- 7 (Strongly agree)

Q24 I use pause and silence differently to suit different cross-cultural situations.

- 1 (Strongly disagree)
- 2
- 3
- 4
- 5
- 6
- 7 (Strongly agree)

Q25 I vary the rate of my speaking when a cross-cultural situation requires it.

- 1 (Strongly disagree)
- 2
- 3
- 4
- 5
- 6
- 7 (Strongly agree)

Q26 I change my non-verbal behavior when a cross-cultural situation requires it.

- 1 (Strongly disagree)
- 2
- 3
- 4

- 5
- 6
- 7 (Strongly agree)

Q27 I alter my facial expressions when a cross-cultural situation requires it.

- 1 (Strongly disagree)
- 2
- 3
- 4
- 5
- 6
- 7 (Strongly agree)

Q28 Members of my team came from common cultural backgrounds.

- 1 (Strongly disagree)
- 2
- 3
- 4
- 5
- 6
- 7 (Strongly agree)

Q29 Members of my team were from the same country.

- 1 (Strongly disagree)
- 2
- 3
- 4
- 5
- 6
- 7 (Strongly agree)

Q30 Members of my team shared similar ethnic backgrounds.

- 1 (Strongly disagree)
- 2
- 3
- 4

- 5
- 6
- 7 (Strongly agree)

Q31 Members of my team shared a similar work ethic.

- 1 (Strongly disagree)
- 2
- 3
- 4
- 5
- 6
- 7 (Strongly agree)

Q32 Members of my team shared similar work habits.

- 1 (Strongly disagree)
- 2
- 3
- 4
- 5
- 6
- 7 (Strongly agree)

Q33 Members of my team had similar communication styles.

- 1 (Strongly disagree)
- 2
- 3
- 4
- 5
- 6
- 7 (Strongly agree)

Q34 Members of my team had similar interaction styles.

- 1 (Strongly disagree)
- 2
- 3
- 4
- 5

- 6
- 7 (Strongly agree)

Q35 Members of my team had similar personalities.

- 1 (Strongly disagree)
- 2
- 3
- 4
- 5
- 6
- 7 (Strongly agree)

Q36 The values of all group members were similar.

- 1 (Strongly disagree)
- 2
- 3
- 4
- 5 (Strongly agree)

Q37 The team as a whole had similar work values.

- 1 (Strongly disagree)
- 2
- 3
- 4
- 5 (Strongly agree)

Q38 The team as a whole had similar goals.

- 1 (Strongly disagree)
- 2
- 3
- 4
- 5 (Strongly agree)

Q39 Team members had strongly held beliefs about what was important within the team.

- 1 (Strongly disagree)
- 2
- 3

- 4
- 5 (Strongly agree)

Q40 Team members had similar goals.

- 1 (Strongly disagree)
- 2
- 3
- 4
- 5 (Strongly agree)

Q41 All members agreed on what was important to the team.

- 1 (Strongly disagree)
- 2
- 3
- 4
- 5 (Strongly agree)

Q42 The team is very competent

- 1 (Strongly disagree)
- 2
- 3
- 4
- 5 (Strongly agree)

Q43 The team gets the work done very effectively

- 1 (Strongly disagree)
- 2
- 3
- 4
- 5 (Strongly agree)

Q44 The team has performed the job well

- 1 (Strongly disagree)
- 2
- 3
- 4
- 5 (Strongly agree)

Appendix B4 The full survey in Vietnamese for Vietnamese managers and employees

Thư ngỏ**Xin chào các anh chị,**

Chúng tôi là hai sinh viên tại trường **BI Norwegian Business School** đang thực hiện **luận văn thạc sỹ**. Chúng tôi rất cảm ơn các bạn đã dành thời gian trả lời bản khảo sát này. Qua đó, chúng tôi hy vọng bài nghiên cứu này góp phần nâng cao nhận thức về nhóm đa văn hóa và tìm hiểu mối liên hệ giữa chi số am hiểu văn hóa và hiệu suất công việc trong nhóm đa văn hoá tại các công ty đa quốc gia ở Việt Nam. Câu trả lời của các bạn sẽ được sử dụng để phân tích trong luận văn thạc sỹ của chúng tôi.

Quy trình

Bạn sẽ trả lời tất cả câu hỏi trong khoảng 10 phút. Đọc kỹ mỗi câu hỏi trước khi trả lời. Không có câu trả lời đúng hoặc sai. Bạn trả lời đúng với quan điểm của mình để chúng tôi có thể hiểu rõ hơn về lĩnh vực nghiên cứu của mình.

Tính bảo mật

Chúng tôi cam kết rằng mọi thông tin thu thập từ các bạn sẽ được bảo mật và giấu tên. Toàn bộ bảng câu hỏi khảo sát sẽ được giữ kín và không ai ngoài những người nghiên cứu được đề tên dưới đây có quyền sử dụng. Mọi dữ liệu sẽ được lưu giữ trong hệ thống cơ sở dữ liệu ứng dụng Qualtrics cho đến khi được xóa bỏ hoàn toàn.

Quyền tham gia

Quyền tham gia trong khảo sát này là hoàn toàn tự nguyện.

Xin lưu ý điền tên của nhóm các bạn trong câu hỏi năm theo cấu trúc: Chữ cái đầu tiên của tên công ty_Tên của phòng làm việc_Tên nhóm làm việc hoặc số thứ tự của nhóm, ví dụ: Procter&GambleCompany_Kinhdoanh_Team 1 (hoặc Xuất khẩu) P&G_Kinhdoanh_1 or P&G_Kinhdoanh_Xuấtkhẩu

Liên hệ

Nếu có bất cứ câu hỏi nào liên quan đến nghiên cứu này, các bạn có thể liên hệ Thao Mai Thanh Le tại Thao.M.Le@student.bi.no hoặc thaolmt@gmail.com, hoặc Thuy Ngoc Duong tại Thuy.N.Duong@student.bi.no hoặc thuyftu.8991@gmail.com.

Chúng tôi rất lấy làm vinh hạnh được gửi thông tin về những phát hiện mới trong nghiên cứu của chúng tôi cho các bạn vào cuối năm 2016 nếu các bạn quan tâm.

Một lần nữa xin cảm ơn sự tham gia của các bạn!

NHÂN CHỨNG HỌC

Q1 Quốc tịch

- Việt Nam
- Quốc gia châu Á khác
- Khác

Q2 Giới tính

- Nam
- Nữ

Q3 Năm kinh nghiệm làm việc

- 1-5 năm
- 5-10 năm
- 10-20 năm
- Hơn 30 năm

Q4 Quy mô nhóm:.....(Số thành viên trong nhóm)

Q5 Tên nhóm:.....(IN HOA)

Viết tên nhóm theo các sau: Chữ cái đầu tiên của tên công ty_Tên bộ phận làm việc_Tên nhóm làm việc hoặc số thứ tự của nhóm, ví dụ:

Procter&GambleCompany_Kinhdoanh_Team 1 (or Xuất khẩu)

→ P&G_Kinhdoanh_1 or P&G_Kinhdoanh_Xuấtkhẩu

Q6 Bạn đã từng sống ở nước ngoài hơn 6 tháng chưa?

- Đã từng
- Chưa bao giờ

Q7 Bạn đã gặp những khó khăn giao tiếp vì rào cản ngôn ngữ đến mức nào?

- Chưa bao giờ
- Hiếm khi
- Thỉnh thoảng
- Thường xuyên

CÂU HỎI KHẢO SÁT

Hãy đọc mỗi câu sau và chọn câu trả lời mô tả đúng nhất về đánh giá của bạn đối với nhóm của mình (1= Hoàn toàn không đồng ý, 7 = Hoàn toàn đồng ý) hoặc (1= Hoàn toàn không đồng ý, 5 = Hoàn toàn đồng ý)

Q8 Tôi thích tiếp xúc với những người từ những nền văn hóa khác nhau

- 1 (Hoàn toàn phản đối)
- 2
- 3
- 4
- 5
- 6
- 7 (Hoàn toàn đồng ý)

Q9 Tôi tự tin là có thể giao tiếp với những người ở nền văn hóa xa lạ với tôi

- 1 (Hoàn toàn phản đối)
- 2
- 3
- 4
- 5
- 6
- 7 (Hoàn toàn đồng ý)

Q10 Tôi chắc chắn là có thể giải quyết những khó khăn để thích nghi với 1 nền văn hóa mới với tôi (Hoàn toàn phản đối)

- 2
- 3
- 4
- 5
- 6
- 7 (Hoàn toàn đồng ý)

Q11 Tôi thích sống trong những nền văn hóa xa lạ với tôi

- 1 (Hoàn toàn phản đối)
- 2
- 3

- 4
- 5
- 6
- 7 (Hoàn toàn đồng ý)

Q12 Tôi tự tin rằng có thể thích nghi được với điều kiện mua sắm trong 1 nền văn hóa khác

- 1 (Hoàn toàn phản đối)
- 2
- 3
- 4
- 5
- 6
- 7 (Hoàn toàn đồng ý)

Q13 Tôi hiểu hệ thống luật pháp và kinh tế của các nền văn hóa khác

- 1 (Hoàn toàn phản đối)
- 2
- 3
- 4
- 5
- 6
- 7 (Hoàn toàn đồng ý)

Q14 Tôi hiểu quy tắc (ví dụ, từ vựng, ngữ pháp) của những ngôn ngữ khác

- 1 (Hoàn toàn phản đối)
- 2
- 3
- 4
- 5
- 6
- 7 (Hoàn toàn đồng ý)

Q15 Tôi biết giá trị văn hóa và niềm tin tôn giáo của những nền văn hóa khác

- 1 (Hoàn toàn phản đối)
- 2
- 3

- 4
- 5
- 6
- 7 (Hoàn toàn đồng ý)

Q16 Tôi biết chế độ hôn nhân của những nền văn hóa khác

- 1 (Hoàn toàn phản đối)
- 2
- 3
- 4
- 5
- 6
- 7 (Hoàn toàn đồng ý)

Q17 Tôi biết về thủ công mỹ nghệ của nền văn hóa khác

- 1 (Hoàn toàn phản đối)
- 2
- 3
- 4
- 5
- 6
- 7 (Hoàn toàn đồng ý)

Q18 Tôi hiểu về quy tắc của việc bộc lộ những hành vi phi ngôn ngữ ở những văn hóa khác

- 1 (Hoàn toàn phản đối)
- 2
- 3
- 4
- 5
- 6
- 7 (Hoàn toàn đồng ý)

Q19 Tôi nhận thức tốt về kiến thức văn hóa tôi dùng khi giao tiếp với những người từ những nền văn hóa khác

- 1 (Hoàn toàn phản đối)
- 2

- 3
- 4
- 5
- 6
- 7 (Hoàn toàn đồng ý)

Q20 Tôi điều chỉnh kiến thức văn hóa của tôi khi mà tôi tiếp xúc với những người đến từ một nền văn hóa xa lạ với tôi

- 1 (Hoàn toàn phản đối)
- 2
- 3
- 4
- 5
- 6
- 7 (Hoàn toàn đồng ý)

Q21 Tôi nhận thức tốt về kiến thức văn hóa tôi dùng trong giao tiếp với các nền văn hóa khác

- 1 (Hoàn toàn phản đối)
- 2
- 3
- 4
- 5
- 6
- 7 (Hoàn toàn đồng ý)

Q22 Tôi kiểm định tính chính xác trong kiến thức văn hóa của tôi khi tôi tiếp xúc với những người đến từ nền văn hóa khác

- 1 (Hoàn toàn phản đối)
- 2
- 3
- 4
- 5
- 6
- 7 (Hoàn toàn đồng ý)

Q23 Tôi thay đổi hành vi lời nói của tôi (ví dụ, ngữ điệu, sắc thái) khi tiếp xúc giữa các nền văn hóa yêu cầu

- 1 (Hoàn toàn phản đối)
- 2
- 3
- 4
- 5
- 6
- 7 (Hoàn toàn đồng ý)

Q24 Tôi thường sử dụng ngắt giọng hoặc yên lặng một cách khác nhau để phù hợp với hoàn cảnh giao tiếp đa văn hóa

- 1 (Hoàn toàn phản đối)
- 2
- 3
- 4
- 5
- 6
- 7 (Hoàn toàn đồng ý)

Q25 Tôi thay đổi tốc độ của lời nói khi có hoàn cảnh giao tiếp đa văn hóa yêu cầu

- 1 (Hoàn toàn phản đối)
- 2
- 3
- 4
- 5
- 6
- 7 (Hoàn toàn đồng ý)

Q26 Tôi thay đổi hành vi phi ngôn ngữ khi có hoàn cảnh giao tiếp đa văn hóa yêu cầu

- 1 (Hoàn toàn phản đối)
- 2
- 3
- 4
- 5

- 6
- 7 (Hoàn toàn đồng ý)

Q27 Tôi thay đổi nét mặt khi có hoàn cảnh giao tiếp đa văn hóa yêu cầu

- 1 (Hoàn toàn phản đối)
- 2
- 3
- 4
- 5
- 6
- 7 (Hoàn toàn đồng ý)

Q28 Những thành viên trong nhóm tôi đến từ cùng một nền văn hóa

- 1 (Hoàn toàn phản đối)
- 2
- 3
- 4
- 5
- 6
- 7 (Hoàn toàn đồng ý)

Q29 Thành viên trong nhóm tôi đến từ cùng một đất nước

- 1 (Hoàn toàn phản đối)
- 2
- 3
- 4
- 5
- 6
- 7 (Hoàn toàn đồng ý)

Q30 Thành viên trong nhóm tôi có chung đặc điểm sắc tộc

- 1 (Hoàn toàn phản đối)
- 2
- 3
- 4
- 5
- 6

-
- 7 (Hoàn toàn đồng ý)

Q31 Thành viên trong nhóm tôi có chung đạo đức nghề nghiệp

- 1 (Hoàn toàn phản đối)
- 2
- 3
- 4
- 5
- 6
- 7 (Hoàn toàn đồng ý)

Q32 Thành viên trong nhóm tôi có chung thói quen công việc

- 1 (Hoàn toàn phản đối)
- 2
- 3
- 4
- 5
- 6
- 7 (Hoàn toàn đồng ý)

Q33 Thành viên trong nhóm tôi có chung phong cách giao tiếp

- 1 (Hoàn toàn phản đối)
- 2
- 3
- 4
- 5
- 6
- 7 (Hoàn toàn đồng ý)

Q34 Thành viên trong nhóm tôi có chung phong cách tương tác

- 1 (Hoàn toàn phản đối)
- 2
- 3
- 4
- 5
- 6
- 7 (Hoàn toàn đồng ý)

Q35 Thành viên trong nhóm tôi có chung tính cách

- 1 (Hoàn toàn phản đối)
- 2
- 3
- 4
- 5
- 6
- 7 (Hoàn toàn đồng ý)

Q36 Giá trị của tất cả thành viên trong nhóm đều giống nhau

- 1 (Hoàn toàn phản đối)
- 2
- 3
- 4
- 5 (Hoàn toàn đồng ý)

Q37 Nhóm tôi cùng chung giá trị công việc

- 1 (Hoàn toàn phản đối)
- 2
- 3
- 4
- 5 (Hoàn toàn đồng ý)

Q38 Nhóm tôi có chung mục đích

- 1 (Hoàn toàn phản đối)
- 2
- 3
- 4
- 5 (Hoàn toàn đồng ý)

Q39 Tất cả thành viên trong nhóm có niềm tin mạnh mẽ về các gì là quan trọng đối với nhóm

- 1 (Hoàn toàn phản đối)
- 2
- 3
- 4
- 5 (Hoàn toàn đồng ý)

Q40 Thành viên trong nhóm có chung mục đích

- 1 (Hoàn toàn phản đối)
- 2
- 3
- 4
- 5 (Hoàn toàn đồng ý)

Q41 Tất cả thành viên nhất trí về cái gì là quan trọng đối với nhóm

- 1 (Hoàn toàn phản đối)
- 2
- 3
- 4
- 5 (Hoàn toàn đồng ý)

Q42 Nhóm tôi rất có năng lực

- 1 (Hoàn toàn phản đối)
- 2
- 3
- 4
- 5 (Hoàn toàn đồng ý)

Q43 Nhóm tôi hoàn thành công việc rất hiệu quả

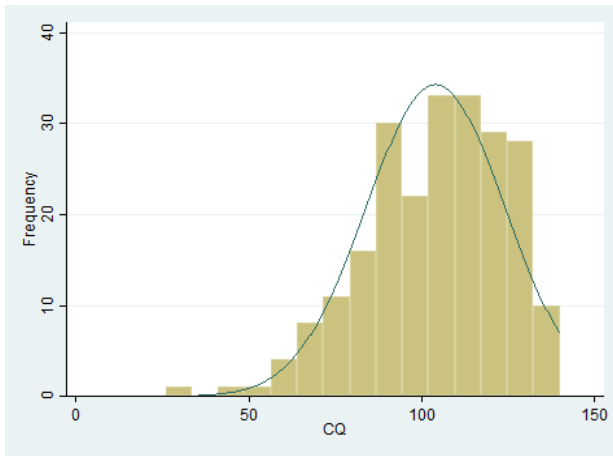
- 1 (Hoàn toàn phản đối)
- 2
- 3
- 4
- 5 (Hoàn toàn đồng ý)

Q44 Nhóm tôi hoàn thành công việc rất tốt

- 1 (Hoàn toàn phản đối)
- 2
- 3
- 4
- 5 (Hoàn toàn đồng ý)

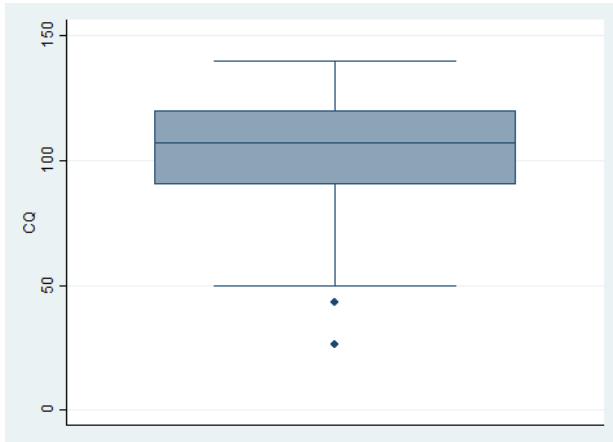
Appendix C Histograms, Boxplots and Normal Q-Q Plots

Histogram Cultural Intelligence

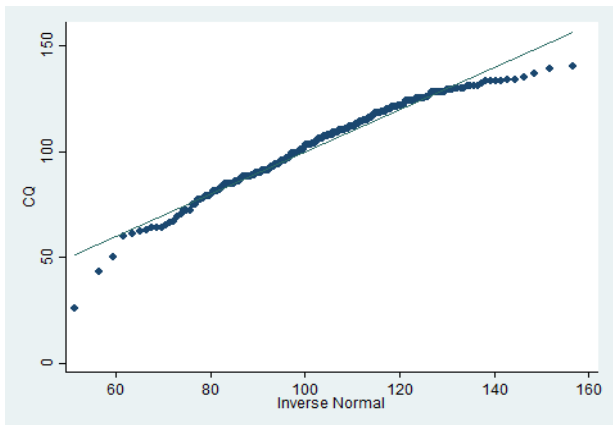


Mean = 103.9868
Std. Dev. = 20.07497
N = 227

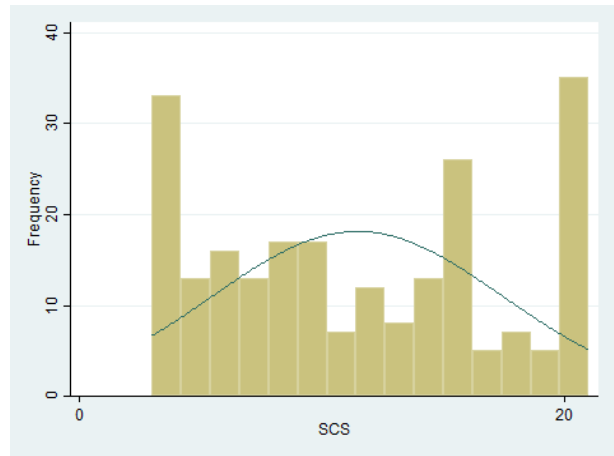
Boxplot Cultural Intelligence



Normal Q-Q Plot Cultural Intelligence

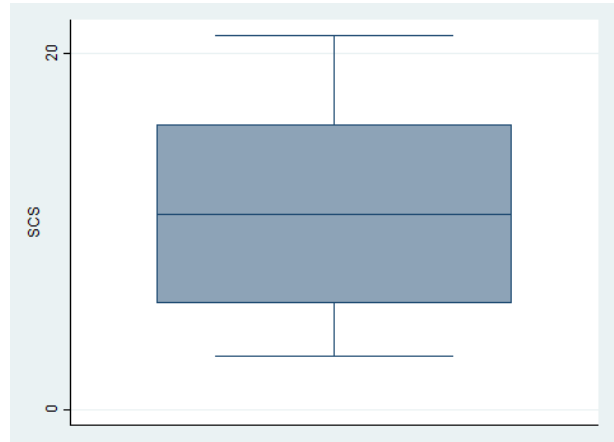


Histogram Social Category Similarity

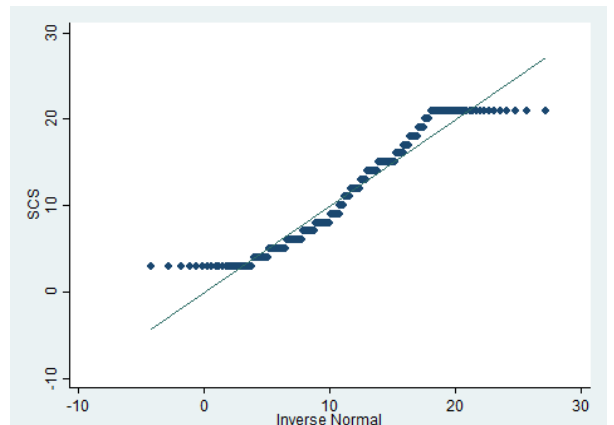


Mean = 11.44493
Std. Dev. = 5.991167
N = 227

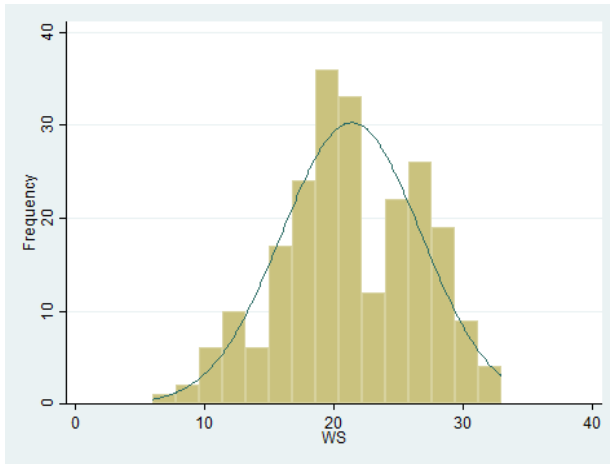
Boxplot Social Category Similarity



Normal Q-Q Plot Social Category Similarity

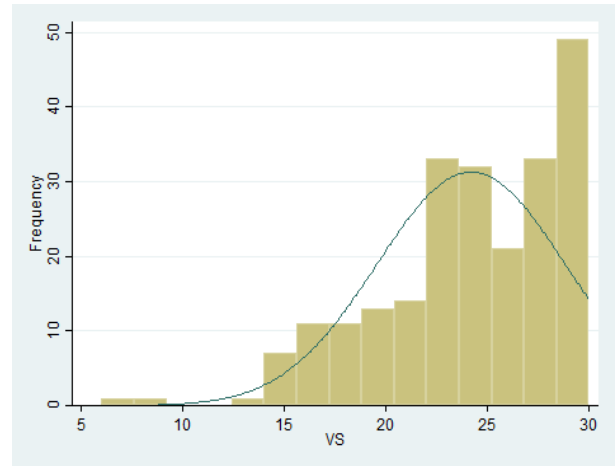


Histogram Work Similarity



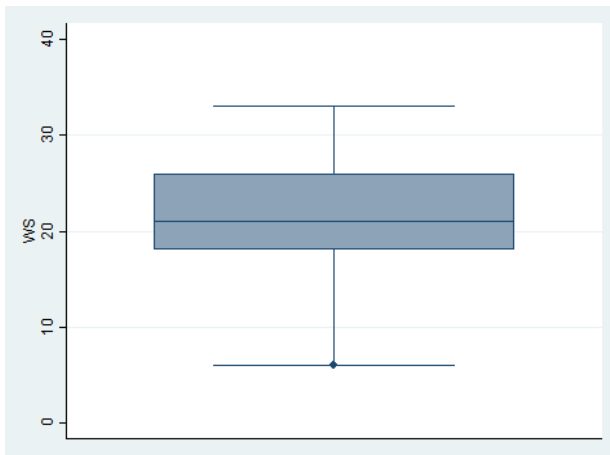
Mean = 21.33921
 Std. Dev. = 5.385527
 N = 227

Histogram Value Similarity

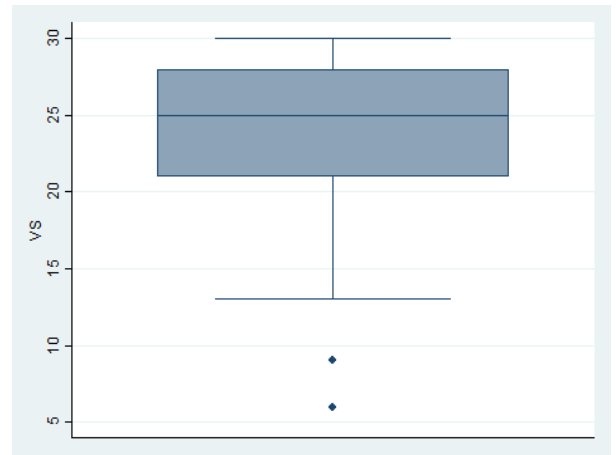


Mean = 24.18502
 Std. Dev. = 4.632622
 N = 227

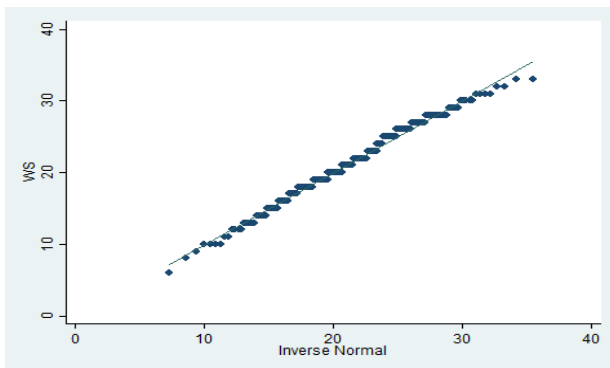
Boxplot Work Similarity



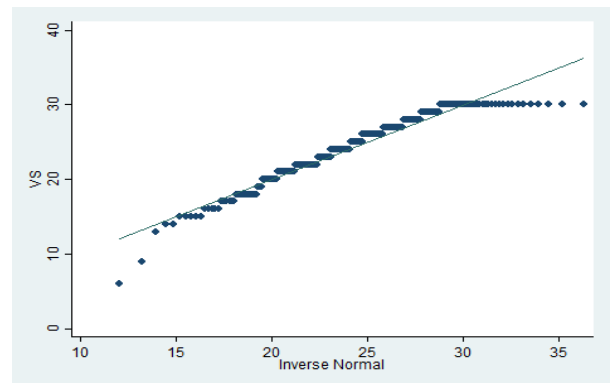
Boxplot Value Similarity



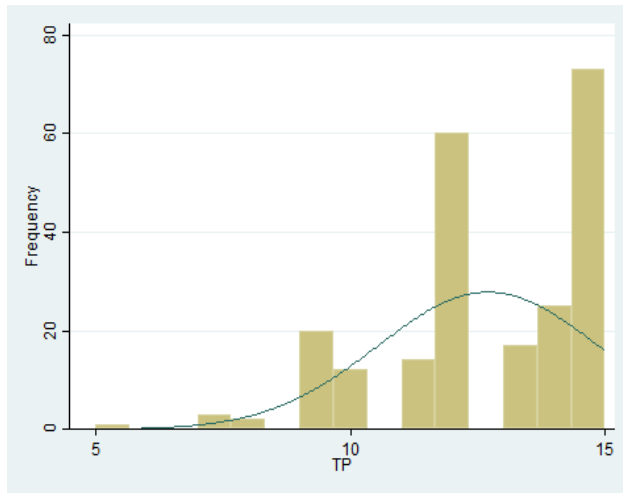
Normal Q-Q Plot Work Similarity



Normal Q-Q Plot Value Similarity



Histogram Team Performance

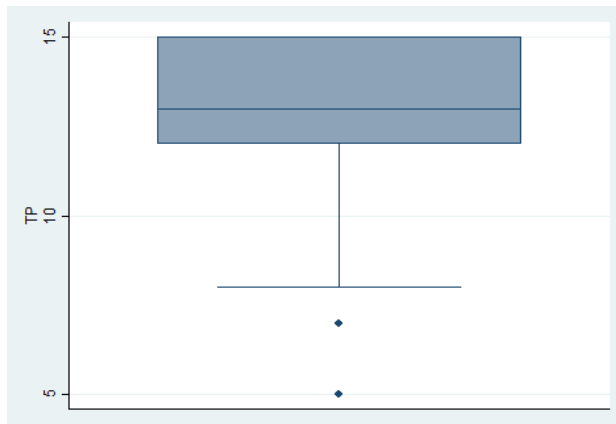


Mean = 12.69604

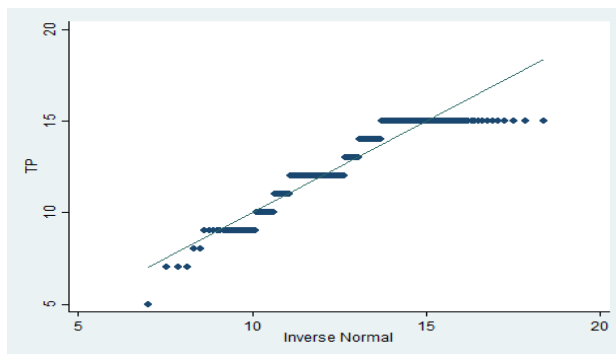
Std. Dev. = 2.167771

N = 227

Boxplot Team Performance

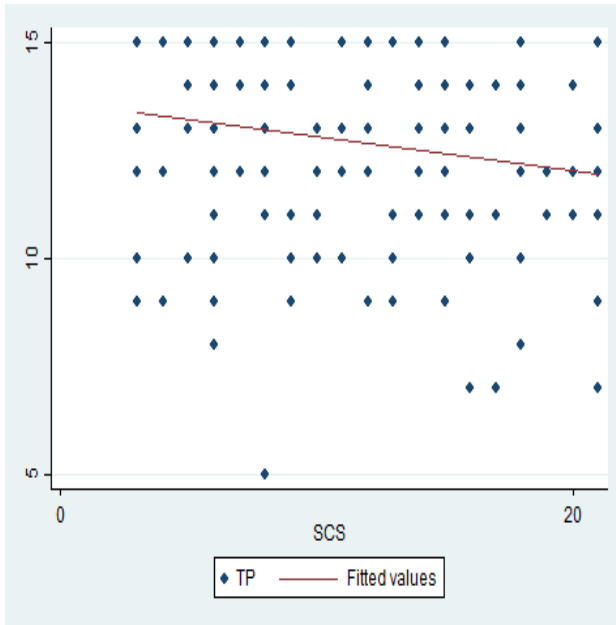


Normal Q-Q Plot Team Performance

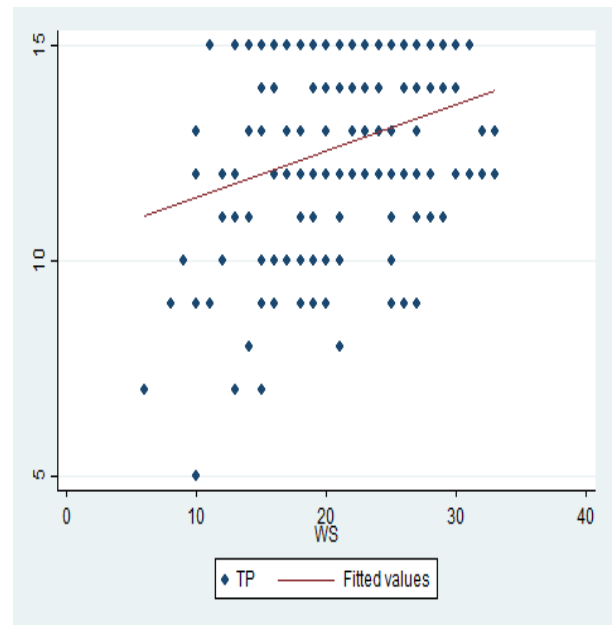


Appendix D Scatterplots

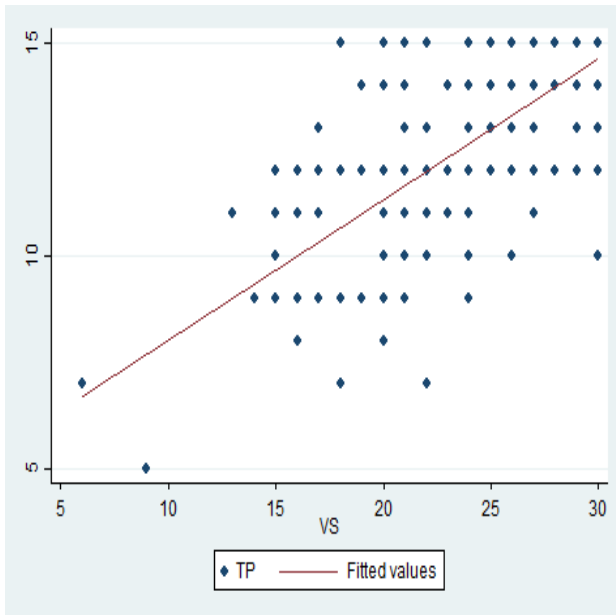
Scatterplot Team performance vs. Social Category Similarity



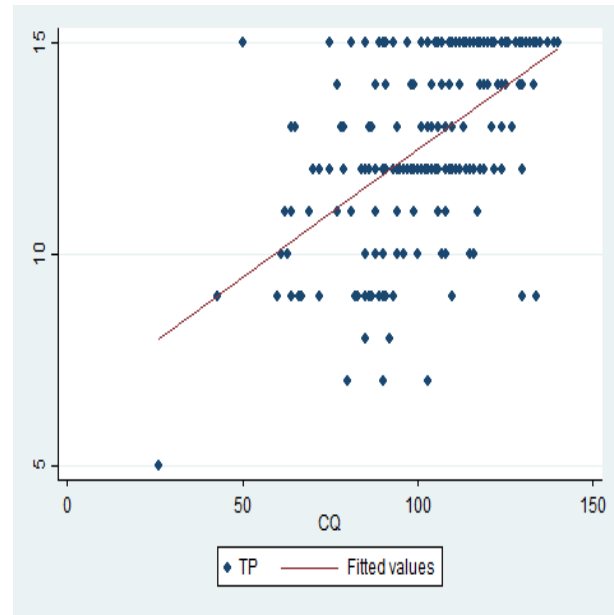
Scatterplot Team performance vs. Work Similarity



Scatterplot Team performance vs. Value Similarity

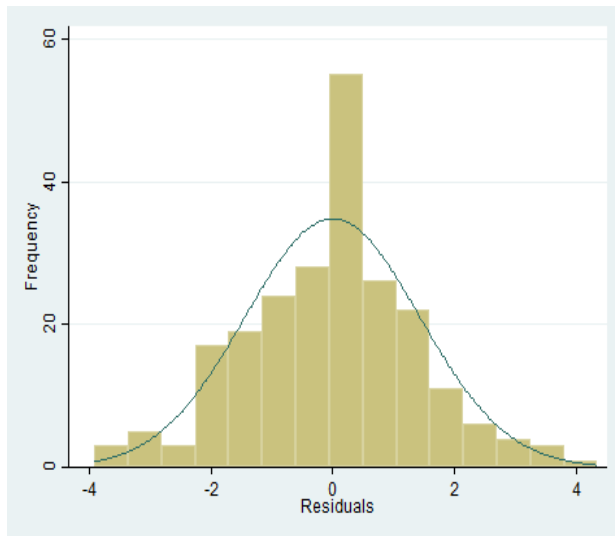


Scatterplot Team performance vs. Cultural Intelligence

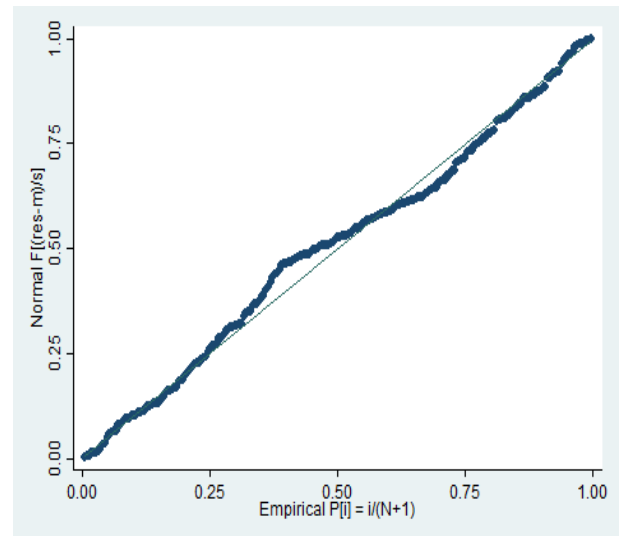


Appendix E Histogram, Scatterplot, and Normal P-P Plot of Regression

Histogram of the Regression



Normal P-P Plot of Regression Standardized Residuals

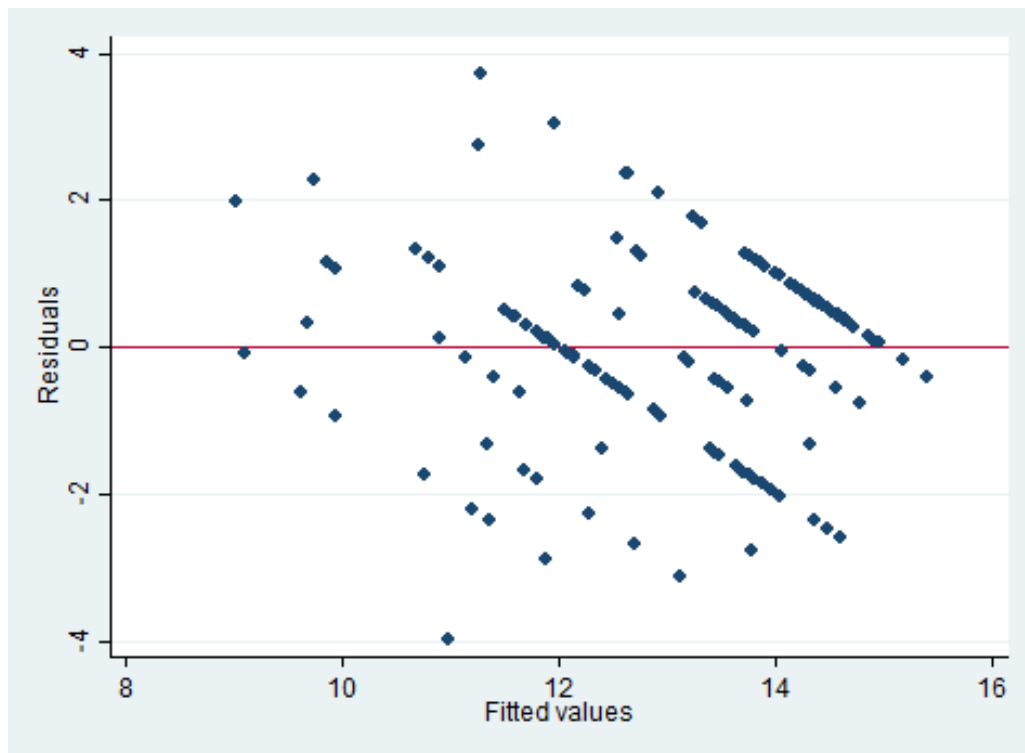


Mean = $-6.17e-10$

Std. Dev. = 1.254408

N = 157

Scatterplot of Standardized Residuals



Appendix F Confirmatory factor analysis for Cultural Intelligence Scales

	<i>Four-dimensional model</i>	<i>Three-dimensional model</i>	<i>Two-dimensional model (1)</i>	<i>Two-dimensional model (2)</i>	<i>Single-factorial model</i>
χ^2	$\chi^2(164) = 363.657$	$\chi^2(167) = 564.724$	$\chi^2(169) = 851.513$	$\chi^2(169) = 933.178$	$\chi^2(170) = 1049.753$
RMSEA	0.073	0.102	0.133	0.141	0.151
TLI	0.933	0.869	0.779	0.752	0.716
CFI	0.942	0.885	0.803	0.779	0.746
SRMR	0.046	0.058	0.083	0.081	0.084

Three-dimensional model: Meta-cognitive and Cognitive components are combined

Two-dimensional model (1): the Meta-cognitive and Cognitive components (cognitive) and the Motivational and Behavioral components are combined

Two-dimensional model (2): Meta-cognitiveCQ was contrasted with the other three factors combined

Appendix G Hierarchical regression analysis results (Individual Level)*Appendix G1 Hierarchical regression analysis of CQ on the relationship between SCS and team performance*

Variables	Performance			
	Step 1	Step 2	Step 3	Step 4
	Coefficient			
<i>Controls</i>				
Nationality [†]	0.2516	0.1506	0.1562	0.1704
Gender ^{††}	0.1758	0.1938	0.3088	0.3175
Business experience ^{†††}	0.7552**	0.7274**	0.3693 ⁺	0.3449 ⁺
Size [‡]	-0.038	-0.0328	-0.0389	-0.0368
Living abroad ^{††}	-0.2469	-0.0988	0.4457	0.4382
Language barriers ^{†††}	0.025	0.0074	0.273	0.2287
<i>Main Effects</i>				
Cultural Diversity				
Social Category Similarity		-0.0611*	-0.0244	0.1534
Cultural Intelligence			0.0605***	0.079***
<i>Interaction Effects</i>				
CQSCS				-0.0017 ⁺
R ²	0.0796	0.1044	0.3483	0.3574
Adjusted R ²	0.0545	0.0758	0.3244	0.3307
F	3.17**	3.65**	14.56***	13.41***
ΔR ²		0.0248	0.2439	0.0091

Two-tailed test ⁺p < 0.1 *p < 0.05 **p < 0.01 ***p < 0.001. N = 227

[†] 1 = Vietnam, 2 = Other Asian countries, 3 = Other countries

^{††} 1 = Male, 2 = Female

^{†††} 1 = 1-5 years, 2 = 5-10 years, 3 = 10-20 years, 4 = more than 20 years

[‡] Number of team members

^{††} 1 = Have lived in a foreign country for longer than six months; 2 = Have never lived in a foreign country for longer than six months

^{†††} 1 = Have never experienced interaction difficulties, 2 = Have seldom experienced interaction difficulties, 3 = Have sometimes experienced interaction difficulties, 4 = Have always experienced interaction difficulties

Appendix G2 Hierarchical regression analysis of CQ on the relationship between WS and team performance

Variables	Performance			
	Step 1	Step 2	Step 3	Step 4
	Coefficient			
<i>Controls</i>				
Nationality [†]	0.2516	0.3073	0.2431	0.3086
Gender ^{††}	0.1758	0.2544	0.3612	0.2837
Business experience ^{†††}	0.7552**	0.7508**	0.3879 ⁺	0.3172
Size [‡]	-0.0380	-0.0421	-0.0442 ⁺	-0.0339
Living abroad ^{††}	-0.2469	-0.3547	0.2809	0.2508
Language barriers ^{†††}	0.0251	0.1217	0.3505*	0.2217
<i>Main Effects</i>				
Cultural Diversity				
Work Similarity		0.1176***	0.0949***	0.4359***
Cultural Intelligence			0.0587***	0.1271***
<i>Interaction Effects</i>				
CQWS				-0.0034**
R ²	0.0796	0.1629	0.3979	0.4250
Adjusted R ²	0.0545	0.1361	0.3758	0.4011
F	3.17**	6.09***	18.01***	17.82***
ΔR ²		0.0833	0.235	0.0271

Two-tailed test ⁺p < 0.1 *p < 0.05 **p < 0.01 ***p < 0.001. N = 227

[†] 1 = Vietnam, 2 = Other Asian countries, 3 = Other countries

^{††} 1 = Male, 2 = Female

^{†††} 1 = 1-5 years, 2 = 5-10 years, 3 = 10-20 years, 4 = more than 20 years

[‡] Number of team members

^{††} 1 = Have lived in a foreign country for longer than six months; 2 = Have never lived in a foreign country for longer than six months

^{†††} 1 = Have never experienced interaction difficulties, 2 = Have seldom experienced interaction difficulties, 3 = Have sometimes experienced interaction difficulties, 4 = Have always experienced interaction difficulties

Appendix G3 Hierarchical regression analysis of CQ on the relationship between VS and team performance

Variables	Performance			
	Step 1	Step 2	Step 3	Step 4
	Coefficient			
<i>Controls</i>				
Nationality [†]	0.2516	0.2527	0.2260	0.2564
Gender ^{††}	0.1758	0.2775	0.3191	0.3037
Business experience ^{†††}	0.7552**	0.3297 ⁺	0.2286	0.2498
Size [‡]	-0.038	0.0006	-0.0080	-0.0075
Living abroad ^{‡‡}	-0.2469	0.1457	0.3772 ⁺	0.3742 ⁺
Language barriers ^{‡‡‡}	0.025	-0.0598	0.0785	0.0805
<i>Main Effects</i>				
Cultural Diversity				
Value Similarity		0.3216***	0.262***	0.3538***
Cultural Intelligence			0.0290***	0.0498*
<i>Interaction Effects</i>				
CQVS				-0.0009
R ²	0.0796	0.5164	0.5597	0.5617
Adjusted R ²	0.0545	0.5009	0.5435	0.5435
F	3.17**	33.40***	34.64***	30.90***
ΔR ²		0.596	0.0433	0.002

Two-tailed test ⁺p < 0.1 *p < 0.05 **p < 0.01 ***p < 0.001. N = 227

[†] 1 = Vietnam, 2 = Other Asian countries, 3 = Other countries

^{††} 1 = Male, 2 = Female

^{†††} 1 = 1-5 years, 2 = 5-10 years, 3 = 10-20 years, 4 = more than 20 years

[‡] Number of team members

^{‡‡} 1 = Have lived in a foreign country for longer than six months; 2 = Have never lived in a foreign country for longer than six months

^{‡‡‡} 1 = Have never experienced interaction difficulties, 2 = Have seldom experienced interaction difficulties, 3 = Have sometimes experienced interaction difficulties, 4 = Have always experienced interaction difficulties

Appendix G4 Hierarchical regression analysis of CQ on the relationship between all cultural diversity constructs and team performance

Variables	Performance			
	Step 1	Step 2	Step 3	Step 4
	Coefficient			
<i>Controls</i>				
Nationality [†]	0.2516	0.2016	0.1918	0.2153
Gender ^{††}	0.1758	0.3305	0.367 ⁺	0.3319
Business experience ^{†††}	0.7552**	0.3522*	0.2544	0.2304
Size [‡]	-0.038	-0.0019	-0.0107	-0.0079
Living abroad ^{‡‡}	-0.2469	0.159	0.3651	0.3496
Language barriers ^{‡‡‡}	0.025	-0.0044	0.1298	0.0917
<i>Main Effects</i>				
Cultural Diversity				
Social Category Similarity		-0.052*	-0.0414*	-0.0902
Work Similarity		0.0738**	0.071**	0.2264 ⁺
Value Similarity		0.2847***	0.2300***	0.2077 ⁺
Cultural Intelligence			0.0282***	0.0515*
<i>Interaction Effects</i>				
CQSCS				0.0005
CQWS				-0.0015
CQVS				0.0001
R ²	0.0796	0.5397	0.5800	0.5835
Adjusted R ²	0.0545	0.5206	0.5606	0.5581
F	3.17**	28.27***	29.83***	22.96***
ΔR ²		0.4601	0.04-3	0.0035

Two-tailed test ⁺p < 0.1 *p < 0.05 **p < 0.01 ***p < 0.001. N = 227

[†] 1 = Vietnam, 2 = Other Asian countries, 3 = Other countries

^{††} 1 = Male, 2 = Female

^{†††} 1 = 1-5 years, 2 = 5-10 years, 3 = 10-20 years, 4 = more than 20 years

[‡] Number of team members

^{‡‡} 1 = Have lived in a foreign country for longer than six months; 2 = Have never lived in a foreign country for longer than six months

^{‡‡‡} 1 = Have never experienced interaction difficulties, 2 = Have seldom experienced interaction difficulties, 3 = Have sometimes experienced interaction difficulties, 4 = Have always experienced interaction difficulties

*Appendix H Multiple regression analysis results (Team Level)**Appendix H1 Result of regression analysis for cultural diversity and performance*

Variables	Performance				
	Model 1	Model 2	Model 3	Model 4	Model 5
	Coefficient				
<i>Controls</i>					
Size ‡	-0.0221	-0.02013	0.0157	-0.0185	0.0111
<i>Main Effects</i>					
Cultural Diversity					
Social Category Similarity	-0.0825**			-0.1744***	-0.0771**
Work Similarity		0.1262***		0.2103***	0.0926**
Value Similarity			0.3377***		0.2822***
R^2	0.0495	0.1025	0.4806	0.2688	0.5194
Adjusted R^2	0.0363	0.0900	0.4733	0.2535	0.5059
F	3.75*	8.22***	66.61***	17.53***	38.37***

Two-tailed test ⁺p < 0.1 *p < 0.05 **p < 0.01 ***p < 0.001. N = 147

‡ Number of team members

Appendix H2 Result of regression analysis of the moderating role of CQ

Variables	Performance			
	Model 1	Model 2	Model 3	Model 4
	Coefficient			
<i>Controls</i>				
Size ‡	-0.0244	-0.0087	0.0083	0.0077
<i>Main Effects</i>				
Cultural Diversity				
Social Category Similarity	0.3778**			0.0691
Work Similarity		0.5528***		0.2719 ⁺
Value Similarity			0.4093**	0.2225
Cultural Intelligence	0.108***	0.1538***	0.0615*	0.0879**
<i>Interaction Effects</i>				
CQSCS	-0.0039**			-0.0012
CQWS		-0.0044**		-0.0018
CQVS			-0.0014	-0.0002
R ²	0.3403	0.4361	0.5357	0.5795
Adjusted R ²	0.3217	0.4202	0.5226	0.5551
F	18.31***	27.45***	40.96***	23.77***

Two-tailed test ⁺p < 0.1 *p < 0.05 **p < 0.01 ***p < 0.001. N = 147

‡ Number of team members

Appendix H3 Results of regression analysis for CQ and team performance with control variable

Variable	Performance						
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
	Coefficient						
Size‡	-0.0222***	-0.0286	-0.0255	-0.0194	-0.0454	-0.0137	-0.0219
Cultural Intelligence		0.0645***					
Motivational CQ			0.1292**	0.2266***			
Cognitive CQ			0.0516		0.1548***		
Metacognitive CQ			0.0778			0.2374***	
Behavioral CQ			0.0120				0.1449***
R^2	0.0023	0.2984	0.3173	0.2669	0.2196	0.2455	0.1465
Adjusted R^2	-0.0045	0.2887	0.2931	0.2568	0.2087	0.2351	0.1347
F	0.34	30.63***	13.11***	26.22***	20.26***	23.43***	12.36***
ΔR^2		0.2961	0.315	0.2646	0.2173	0.2432	0.1442
ΔF		30.29	12.77	25.88	19.92	23.09	12.02

Two-tailed test ⁺p < 0.1 *p < 0.05 **p < 0.01 ***p < 0.001. N = 147

‡ Number of team members

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BI Norwegian Business School
Preliminary Thesis Report

**Cultural Intelligence's influence on
performance of multicultural teams**

Hand-in date:
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Campus:
BI Oslo

Examination code and name:
GRA1900 Preliminary Thesis Report

Supervisor:
Gillian Warner-Söderholm

Programme:
Master of Science in Business, International Business

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Summary

This report is a thesis proposal for our master thesis. The chosen topic is influence of cultural intelligence on performance of multicultural teams. The report is composed of five main sections: introduction, theoretical background, literature review, theoretical framework and hypotheses and research methodology. In the first section, motivation, purpose of the study and research questions are clearly elaborated. Next, the theoretical concepts used in the thesis are clarified including cultural intelligence, cultural diversity, multinational teams and team performance. Subsequently, overview and discussions of current studies are given with some limitations and suggestion for future researches. Then, theoretical framework based on current studies is modeled along with hypotheses to be tested. Also, the research methodology is set up with measures for such concepts.

The scope of the study will be limited to the multinational companies in Vietnamese context. The main objective of this study is to test a model that illustrates the relationship between cultural diversity, team performance and cultural intelligence.

1. Introduction to thesis topic

1.1 Motivation for the research

Today, rapid advances in technology and communication have created a global economy (Friedman, 2006). As a result, companies have more opportunities to enter foreign markets, especially markets from developing countries with high potential of labor forces and natural resources. However, this trend causes many organizations and individuals to face with challenges from cultural diversity at work (Early, Ang & Tan, 2006). It is increasingly important to better grasp the reasons underlying why certain individuals function more effectively than others in multicultural teams. To satisfy the need, Early and Ang (2003) first developed the concept of Cultural Intelligence (CQ), which is defined as “a person’s capability to adapt to new cultural contexts” with positive connection to team performance (Chen et al., 2011, Duff et al., 2012). Coming from a developing country, Vietnam and witnessing big boom in Vietnamese economy in globalization period, we hope to contribute to exploring the link between CQ and performance in multicultural teams of organisations in Vietnamese context.

1.2 Purpose of study and research question

Although there is currently an emerging interest in research about cultural intelligence and multicultural teams, only few empirical works shed light on the relationship between CQ and performance in multicultural teams. Hence, the overall objective of our study is mainly to investigate this relationship and demonstrate the important of CQ in multicultural teams. We specifically aim to answer the following question: *What is the influence of cultural intelligence on performance of multicultural teams?*

2. Theoretical background

2.1 Cultural Intelligence

Cultural Intelligence, cultural quotient or **CQ**, a term in business, education, government and academic research can be understood as the capability to relate and work effectively across cultures. According to Dyne, And & Koh (2008), “CQ is another complementary form of intelligence that explains adaptability to diversity and cross-cultural interactions”, which “differs from other types of

intelligence, such as IQ and EQ, because it focuses specially on settings and interactions characterized by cultural diversity”.

Christopher Early and Soon Ang first developed the concept of CQ in Cultural Intelligence: Individual Interactions across cultures. The construct of CQ was introduced by Earley (2002), and Earley and Ang (2003) to explain differences in the effectiveness of individual interactions across cultures. CQ refers to ”a form of situated intelligence where intelligently adaptive behaviors are culturally bound to the values and beliefs of a given society or culture” (Earley & Ang, 2003, p. 59) as it is defined as a person’s capability to adapt effectively to new cultural contexts. Four dimensions of CQ recognized by Earley & Ang (2003) are cognitive CQ, meta-cognitive CQ, motivational CQ, and behavioral CQ. Metacognitive and cognitive intelligence are more related to internal facets of CQ or mental capabilities, concerning knowledge content and innate cognitive abilities, less related to behavioural adjustment whereas motivational and behavioural intelligences are external facets of CQ or behavioural capabilities and are related to how individuals adapt and adjust to their environment in a cross-cultural setting. (Adair, Hideg & Spence, 2013; Ang et al., 2007)

Cognitive CQ is the capability to cultivate and develop a working knowledge of cross-cultural cues and patterns of appropriate behavior about economic, legal, and social aspects of different cultures. People who have a higher cognitive CQ possess better cognitive- processing capabilities in a new cultural setting and can incorporate new information in order to understand and interpret new experiences. Thus, they have better adaptability (Kim & Slocum, 2008). Meta-cognitive CQ is defined as a person’s mental processing in order to gain awareness and understanding of the appropriate ways of a different culture. People with strength in meta-cognitive CQ consciously question their own cultural assumptions and adjust their mental models to find the preferred one.

Meanwhile, Motivational CQ is representative of the inner drive and determination to satisfy the need to learn about cultural differences in varying situations. Individuals with higher motivation in a cross-cultural context can gain more attention and energy to perform better and become more confident when accomplishing a given task. As a result, a person with a higher motivational CQ tends to have a stronger desire to accept challenges in a new environment and a

greater will to tolerate frustration, which leads to better adaptability. Behavioral CQ is the ability to be sensitive to changing conditions within a multi-cultural setting and be flexible to modify behaviors accordingly. Anyone with a higher behavioral CQ gains easier acceptance by the associated group so that they can develop better interpersonal relationships.

2.2 Cultural diversity, multicultural teams and team performance

Cultural diversity

There are several definitions and conceptualizations of diversity. According to McGrath, Berdahl, and Arrow (1995 as cited in Ely & Thomas, 2001), diversity is as characteristics of groups of two or more people that typically refers to demographic differences of one sort or another among group members. Diversity is also generally defined as “any attribute that another person may use to detect individual differences” (Williams & O'Reily, 1998). Individual differences not only contain personal attributes, ranging from age, gender to educational background or nationality but also affect the application and combination of existing knowledge and the communication and interaction between people. Individuals, however, are often unaware of those differences that set them apart from others. Thus, this unawareness of diversity might lead to misunderstandings of one's behavior and interaction with other people. This study focuses on culture as an important and frequently ambiguous source of diversity.

Cultural diversity (also known as multiculturalism) represents a state of being different in kind, form and character due to different cultural backgrounds. The legitimacy of the concept of cultural diversity was claimed by the World Commission on Culture and Development, and soon enough was broadly embraced in the cultural policy lexicon in Europe to define the “conscious mobilization of collective cultural differences and concomitant claimed to the recognition of the cultural rights” (Isar, 2006).

Multicultural teams

Following Marquardt and Horvath (2001) and Bailey and Cohen (1997), multicultural teams (or MCTs) can be seen as a collection of individuals with different cultural backgrounds, who are interdependent in their tasks, who share responsibility for outcomes, who see themselves and are seen by others as an

intact social entity embedded in one or more larger social systems, and who manage their relationships across organizational boundaries and beyond. Thus, there is no doubt that having MCTs with high CQ is very essential in order to build this sort of momentum, and to establish or maintain effective team-work over time (Earley et al. 2006).

Team performance

According to Murphy, performance is defined as behaviors concerning the goals of the organization while Campbell ??? (1990) defines performance as those actions or behaviors under the control of the individual, contributing to the organization's goals. Particularly, according to Campell 1999, performance is considered as the function of knowledge, skills, abilities and motivation of members directed at role-prescribed behavior, such as formal job responsibilities. Team performance as a whole is composed of the outputs produced by the group for the whole tasks, along with the contribution of each individual member in a team to the outcome success of the whole team. (OPM website).

Team performance is influenced significantly by cultural value diversity. On the one hand, multicultural members bring different information and perspectives so multicultural teams are inclined to generate innovative and creative solutions to resolve organisation problems and satisfy customers (Adler, 2002). On the other hand, diversity within teams has been identified as more likely to negatively affect team performance initially. Lovelace et al. (2001) found that teams with functional diverse members fail to achieve their goal in generating innovative outcomes as they have different "thought-worlds" associated with the skills and/or perspectives with which they have been trained. Similarly, Thomas 1999 and Moon 2013 noted that the performance of a team with low cultural diversity or culturally homogeneous team will be less likely to experience ineffective team processes such as poorer communication and decision making and greater conflict, resulting in lower levels of team performance (productivity and quality) and lower levels of team member satisfaction. To conclude, team diversity can lead to positvie and negative outcomes due to inevitable conflicts that arises (at least short-term period) in diverse teams so that members of such hetergeneous teams resolve their differing preferences and misunderstandings becomes critical in determining the more positive outcomes of diverse teams. In this study, we will

consider MCTs' performance in terms of team empowerment, productivity, customer service and cooperation.

3. Literature review

3.1 Overview of current studies

The following classification of current studies on the influence of CQ on performance of MCTs is the result of inspecting the most high-quality journals as well as established databases and search engines. Moreover, we also used the database Business Source Premier and the search engine Google Scholar. We base our literature review on 9 empirical articles until now. The main hypotheses and results of our analysis are presented in Appendix.

3.2 Discussion of current studies

3.2.1 Content-based discussion

Regarding the *theory behind effects* of CQ on performance of MCTs, several studies are obtained from using theoretical foundations (Duff et al. 2012; Adair et al. 2013; Chen&Lin, 2013; Chen et al. 2011; Groves &Feyerherm,2011).

Concerning studies that base their predictions on established theories, the rest of those studies refer to the premises of *Cutural Intelligence theory* (Imai & Gelfand, 2010; Bücken et al. 2014; Moon, 2013; Lee &Sukoco 2010).

Previous studies showed that culturally homogenous teams perform much better than heterogeneous teams on most of the performance measures in the short run while culturally heterogeneous teams improved performance at a quicker rate than culturally homogeneous teams over longer periods of time (Watson et al., 1993, Moon, 2013). The main reason for the rate of change is that cultural intelligence (CQ) improves among members over time to buffer against the potential negative impacts of cultural diversity on team performance. Culture shock can occur as a result of an inability to understand local customs, social interactions, and local language, which is detrimental to overall performance of a MCT at first. However, with high behavioral CQ, an individual quickly know how to adopt their verbal and nonverbal behavior to meet expectations to maintain a positive self-image, resulting in a better performance in MCTs (Chen et al., 2011, Duff et al., 2012). Also, MCTs with a high level of CQ will improve performance more quickly than

MCTs with lower levels of CQ as high levels of team CQ is more likely to diminish the adverse effect of cultural diversity on initial team performance (Moon, 2013) and behavioral and metacognitive CQs are beneficial for the emergence of shared values (the degree to which team members similarly endorse a broad set of guiding values when engaged in team- work) in MCTs as well but the other two CQs have no influence at all in shared values (Adair et al., 2013). One of the impacts of diversity on team outcomes is information-processing perspective, which is supposed to bring positive effects to team performance concerning information diversity of MCTs (Moon, 2013). Higher CQ level among members (metacognitive, cognitive and motivational CQs) has direct and positive effects on knowledge sharing, as a result, their organizations are to benefit from successfully managing work teams in which members are from different countries with different cultural origins and complementary to each other in facilitating knowledge sharing (Chen&Lin, 2013). A team with good performance also needs cooperation and communication among members to function properly for tasks assigned. Individuals who have greater ability in adapting to situations of cultural diversity (high CQ) also tend to have open-minded and cooperative mindset and more likely to invest effort into forming an accurate understanding of their surrounding and cognitive differences in culture to achieve their goal of adapting effectively to the intercultural situation, increasing team performance efficacy (Imai & Gelfand, 2010, Lee & Sukoco, 2010, Bücken et al., 2014). Accompanied with members in a MCT, leaders also play indispensable role as leaders with advanced CQ are better equipped to understand the dynamics of culturally diverse settings, such as the ability to overcome the miscommunication and misunderstandings among partners, suppliers, and/or customers that often characterize failed international joint ventures (Mannor, 2008). In the domain of MCTs, leader CQ has been found to positively influence team members' perceptions of leader and team performance to facilitate higher team performance on diverse work teams compared with homogeneous work teams (Groves &Feyerherm, 2011).

3.2.2 Methodological issues

Regarding methodology, the majority of current studies focus on descriptive research designs. The particular assumed relationship between CQ and

performance of MCTs is tested by using structural equation modeling in most articles. On one hand, structural equation modelling (SEM) is concerned with estimating (linear and non-linear) relationships between 4 factors of CQ. On the other hand, these studies used SEM methodology to test hypotheses on the relationships between MCTs' performance and CQ via the measurement model as well as relationships among 4 factor CQ variables via the structural model.

Regression analysis is also conducted to explore which of the four CQ facets was driving the overall CQ effect on complementary sequences of integrative information behaviors (Imai & Gelfand, 2010). According to Adair et al. (2013), CQ considered as a predictor in regression equation. In practice, however, regression equations are often not fitted primarily for predicting, but for investigating which predictor or explanatory variables are needed and what their relative importance might be (Galbraith et al. 2002). To address multicollinearity between variables, Duff et al. (2012) used the technique called "mean centering", where the variable's mean is subtracted from the means of all the observations (Aiken & West 1991); thus, the means of all the independent variables such as meta-cognitive, cognitive, motivational and behavioral intelligence were centred for the regression analyses to enhance the reliability of measures.

The analysis of confirmatory factor is the focus of four studies (Imai & Gelfand, 2010; Bückner et al. 2014; Chen&Lin, 2013; Groves &Feyerherm,2011). The reseachers used CFA to test hypotheses arising from CQ theory by defining the model hypothesis about the relationships between CQ and MCTs' performance. However, using CFA requires the experts to have sufficient knowledge to define the model hypotheses, which affects the result reliability to some extent.

Furthermore, the hierarchical linear model (HLM) is also used to test the cross-level model in one study (Moon, 2013). The main reason for using HLM is that it allows the examination of relationships across different levels by simultaneously estimating both within-person and between-person variances of the study variables (Bryk & Raudenbush, 1992; Hofmann, 1997).

In terms of data collection, most of those research used questionnaire, online and paper surveys (Duff et al. 2012; Adair et al. 2013; Chen& Lin 2013; Chen et al. 2011; Groves &Feyerherm,2011;Imai & Gelfand, 2010; Bückner et al. 2014; Moon, 2013; Lee & Sukoco, 2010). Group report is used to collect data in one experiment (Groves &Feyerherm,2011).

3.3 Identification of limitation

The first limitation pertains to the generalizability of findings due to the nature of student sample and unique sample. It is possible that results will not generalize to work teams in organizations because of characteristics of these kinds of sample (Chen et al. 2011; Bückner et al. 2014; Chen& Lin 2013; Adair et al. 2013; Groves &Feyerherm,2011; Moon, 2013; Lee& Sukoco 2010; Duff et al. 2012)

Second, the existence of team in some of experiments was very short and their interaction was limited (Adair et al. 2013, Moon, 2013, Duff et al. 2012)

Third, there may be other important factors that can potentially contribute to group performance that were not investigated and tested in these studies.

3.4 Future research

We identify 3 research gaps that should be conducted by future studies in order to give a more comprehensive response to this topic. In terms of research gap 1, future studies must extend the present study into the sectors of other industries, include all levels of foreign employees to increase the generalization of results. Moreover, to enable comparative research, more and different country samples should be included in future research. Secondly, future research should examine performance in teams that are in existence for a longer period of time. Finally, future study can include several determinants of team performance, such as team level of emotional intelligence, cognitive ability, personality, and attitudes.

4. Theoretical framework and hypotheses

4.1 Theoretical framework

This study attempts to examine the relationships between cultural diversity, CQ and performance in MCTs. More specifically, it hypothesizes a moderating effect of CQ on the relationship between cultural diversity and team performance. The conceptual research model is presented in Figure 1.

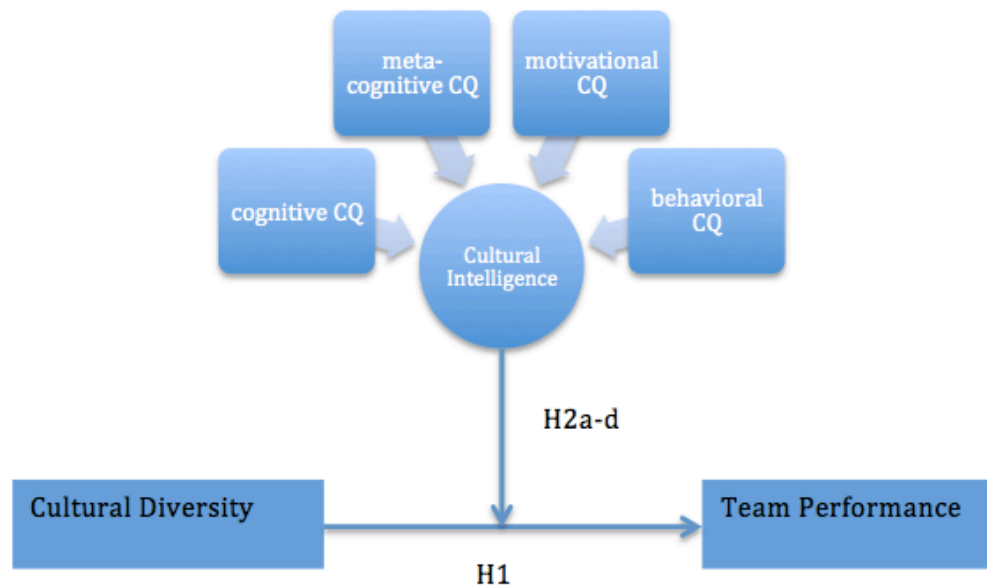


Figure 1: Conceptual Model

4.2 Hypotheses

Prior studies shows that the relationship between diversity and team outcomes are mixed, and even contradictory (Van Knippenberg & Schippers, 2007; Mannix & Neale, 2005; Nakui, Paulus, & Van der Zee, 2011). Three theoretical approaches have commonly been chosen to explain the antagonistic effects of diversity: information-processing, similarity-attraction and social categorization perspectives(Williams & O'Reilly, 1998). According to Moon (2013), an information-processing perspective presumes the positive effects of diversity, which argues that diversity brings positive contributions to teams. Following this perspective on diversity, diverse teams have the potential to perform better than monocultural teams due to increased openness, creativity, learning, and flexibility as well as owing to broader search space, better problem solving, and new combinations of knowledge (Stahl et al., 2010).

In contrast, both similarity–attraction and social categorization perspectives have negative effects of diversity on team performance. According to Williams & O'Reily (1998), Earley & Ang (2003) in terms of the similarity- attraction perspective, in general, people tend to prefer team members that display similarities with regard to gender, age, race, values and beliefs. Thus, people tend to identify with individuals whom they share national and cultural identities with. Moreover, according to Earley & Mosakowski, (2000), nationality, cultural origin,

and ethnicity have been the most prominent social categories by which people tend to categorize themselves into specific groups, so social categorization of in-groups and out-groups can be problematic in collaboration and communication in top management teams (TMTs) (Moon, 2013). According to these perspectives, diverse teams are likely to perform worse than homogeneous teams since they lack economies of scale in the knowledge production, increase distrust, conflict, and dissatisfaction, and decrease social integration (Stahl et al., 2010).

Earley and Mosakowski (2000) also pointed out that culturally homogeneous teams performed better than culturally diverse teams in the short run. However, the gaps in performance were diminished over time the time members spend working together neutralized or minimized the effects of surface-level diversity on group cohesiveness (Harrison et al., 1998). In agreement, Williams and O'Reilly (1998) suggest that increased cultural diversity has negative effects on social integration, conflict and intercultural communication.

Although the existing theories are different regarding the relationship between cultural diversity and team performance, it seems that most studies highlighting the strategic advantages provided by multicultural teams are outnumbered by studies emphasizing the detrimental effects of cultural diversity on team performance (Gelfand et al., 2007). Thus, this study would check the negative relation between cultural diversity and MCT's performance.

Hypothesis 1: Cultural diversity negatively affects MCT's performance.

According to Zellmer-Bruhn et al. (2008), while individuals can gain from working together, diversity can interfere with members' ability to exchange and integrate their knowledge and skills. Therefore, it can be said that individuals with positive attitudes towards cultural differences perform better in diverse teams, which illustrates the moderating effect of CQ on cultural diversity's negative relation to team performance (Moon, 2013).

According to Earley et al. (2006), culturally intelligent teams facilitate team performance by developing collective optimism, efficacy, and identification within teams while overcoming the challenge of managing a diverse workforce. Furthermore, MCTs with high CQ is very essential in order to establish or maintain effective teamwork over time (Earley et al., 2006). Moon (2013)

indicated that cultural intelligent teams not only diminish the negative impact of cultural diversity on interpersonal trust, but also promote identification within teams. Team member's cultural intelligence also results in a greater acceptance of cultural diversity and an increased willingness to share knowledge, which improves a team's performance (Moon, 2013).

CQ facilitates the effective operations of culturally diverse teams by providing the necessary capabilities to cope with problems from multicultural situations, and engage in cross-cultural interactions (Ang & Van Dyne, 2008). Rockstuhl and Ng (2008) examined the relationship between CQ and interpersonal trust in MCTs and found that CQ diminished the negative impact of cultural diversity on interpersonal trust within teams. Correspondingly, Moon (2013) claimed that CQ was predicted to improve performance in MCTs, where better understanding and obtaining of cultural diversity and effective team decision making could be a tremendous asset for highly interdependent cross-cultural team activities. More specifically, a high level of team CQ may not only weaken the negative effect of cultural diversity on initial team performance but also may accelerate the rate of improvement in team performance. Therefore, we suggest to check this relationship through the following hypothesis.

Hypothesis 2: CQ will moderate the relationship between cultural diversity and MCT's performance. Or in other words, a higher level of team CQ will significantly weaken the negative effect of cultural diversity on MCT's performance.

In terms of metacognitive CQ, team members who are curious about experiencing new (social) situations may benefit from metacognitive CQ. Individuals with high metacognitive CQ prepare for or strategize before culturally diverse encounters. This is called planning. During intercultural interactions, those individuals display a high degree of awareness with regard to how culture influences their own and others' mental models. During and after culturally diverse encounters, these individuals constantly check their own assumptions and adjust their mental maps when actual experiences differ from expectations (Dyne et al., 2012). Ang et al. (2006) stated that the combination of being open to experience and metacognitive CQ leads to "thinking about thinking". These three processes occur and describe the individual's ability for deep cultural information processing. According to

Ang et al.(2007), metacognition positively affects task performance facilitating a more constructive cooperation among the group members (Cohen & Bailey, 1997). Hence, it is assumed that:

H2a: In MCTs, a high (average) level of metacognitive CQ positively moderates the relationship between cultural diversity and team performance.

In terms of cognitive CQ, it consists of culture-general and culture- specific knowledge. It is the general understanding of important elements representing a cultural environment that helps people to recognize how a cultural system influences behaviors and interactions of other people and why this is different for every culture (Van Dyne et al., 2012). Having cognitive CQ enables people to make well-founded judgments in culturally diverse situations (Ang & Van Dyne, 2008).

Generally, individuals with high cognitive intelligence know more about the legal, economic and social systems of other countries, and therefore are better at spotting differences and analogies across cultures (Ang et al., 2007).

Therefore, this ability will positively moderate the relationship between cultural diversity and team performance.

H2b: In MCTs, a high (average) level of cognitive CQ positively moderates the relationship between cultural diversity and team performance.

In terms of motivational CQ, it includes intrinsic and extrinsic interest and self-efficacy to adjust. Intrinsic interest characterizes a person's enthusiasm when learning about his own culture. It contrasts with extrinsic interest, which is specific for people that are more fascinated about other cultures, and find learning about them more satisfying. The extrinsic interest compared with the intrinsic, is more focused on the personal benefits that could be extracted from culturally diverse experiences. Self-efficacy to adjust concerns the confidence in one's ability to adjust to new cultures or interact with people from different cultures (Dyne et al., 2012). It rewards the individual holding high self- efficacy with an increased level of confidence, which makes interaction in culturally diverse environments easier and more pleasing. Thus, we hypothesis that

H2c: In MCTs, a high (average) level of motivational CQ positively moderates the relationship between cultural diversity and team performance.

According to Van Dyne et al. (2009), behavioral CQ has more components which are verbal behavior, non-verbal behavior and speech acts. Verbal behaviours concern the flexibility in vocalization (accent, tone). Non-verbal behaviours represent the flexibility in communication that is conveyed via gestures, facial expressions, and body language, rather than through words. Speech acts include the flexibility in manner of communicating specific types of messages such that requests, invitations, apologies, gratitude and saying ‘no’ are expressed appropriately based on local standards.

Verbal flexibility is said to foster effectiveness of communication, non-verbal flexibility shows respect for various cultural norms, and the flexibility of speech-acts expresses a deep level of understanding of communication which facilitates the interaction amongst diverse cultures (Van Dyne et al., 2012). Therefore, behavioral CQ can positively affect the relationship between cultural diversity and performance within a multicultural team. In sum, people with a high level of behavioral CQ can increase the quality of the performance, by adjusting their behavior to the cultural demands of their team members. Therefore, it is assumed that:

H2d: In MCTs, a high (average) level of behavioral CQ positively moderates the relationship between cultural diversity and team performance.

5. Research Methodology

5.1 Research design

As the aim of this research is to study the impact of CQ on performance in multicultural team, where few studies exist, we define that a mixed method design to integrate quantitative and qualitative research is appropriate. Quantitative methods will be used for testing hypotheses, and the qualitative ones for giving further insights on quantitative analysis results.

5.2 Measures

5.2.1 Cultural diversity

This study focuses on measuring two types of diversity: surface- and deep-level diversity. According to Stahl et al. (2010), surface-level diversity is generally understood as differences among team members in overt demographic characteristics, such as race, gender, age or ethnicity. Meanwhile, deep-level diversity refers to differences in psychological characteristics, such as personality, values and attitudes (Stahl et al., 2010).

The measurements of cultural diversity is based on perceived similarity of Zellmer-Bruhn et al. (2008) and deep level diversity coined by Jehn et al. (1999). Perceived similarity, which is defined as the degree to which members view themselves as having differences, is used to indicate the degree and type of diversity within a team (Zellmer-Bruhn et al., 2008). Its scale balances among differences and similitudes of team members, and contains 8 affirmative statements, with which respondents will have to agree or disagree. First, a three-item scale measures perceived social category similarity (SCS), by asking respondents to rate the extent to which members feel their team is similar with respect to cultural background, nationality and ethnicity. Second, perceived work style similarity (WSS) is measured by a five-item scale indicating the extent to which members feel their team is similar with respect to work habits, interaction styles, communication styles, work ethic and personalities. In brief, results support using the mean of individual responses as a measure of both SCS and WSS (Zellmer-Bruhn et al, 2008). Each of these scales will use a seven-point response format (1=disagree strongly, 7=agree strongly).

Additionally, Jehn et al.(1999) uses deep level diversity, which arises when members of a workgroup diverge in terms of what they think the group's actual tasks, goals or mission should be (Jehn et al., 1999). The questions are measured using a 5-point Likert scale anchored by "1=strongly disagree" and "5=strongly agree. Team members are asked if the values of all team members were similar, if the team as a whole had similar work values, if the team as a whole had similar goals, whether members had strongly held beliefs about what was important within the team, whether members had similar goals, and if all members agreed on what was important to the team (Jehn et al., 1999).

5.2.2 Cultural intelligence

The multidimensional concept of CQ is also reflected in the questionnaire items. Developed and validated by Ang et al. (2007), multidimensional cultural intelligence scale (CQS) with 20 items follows the construction of CQ in four distinct factors including cognitive, meta-cognitive, motivational, and behavioral CQ. In the research by Ang et. al (2007), cultural intelligence scale is used to predict differential relationships between the four CQ dimensions (metacognitive, cognitive, motivational and behavioural) and three intercultural effectiveness outcomes (cultural judgment and decision making, cultural adaptation and task performance) in culturally diverse settings. Ang and Van Dyne's Cultural Intelligence Scale has experienced an extensive validation process to assess the generalizability of the CQS across multiple student and executive samples, across time periods from four weeks to four months and across different countries so it can be seen as a reliable cultural intelligence scale for the setting of our study. CQS consists of four different items for metacognitive CQ (e.g., "I am conscious of the cultural knowledge I use when interacting with people with different cultural backgrounds"), six items for cognitive CQ (e.g., "I know the legal and economic systems of other cultures"), five for motivational CQ (e.g., "I enjoy living in cultures that are unfamiliar to me"), five for behavioral CQ (e.g., "I alter my facial expressions when a cross-cultural interaction requires it"). In order to calculate the overall mean for CQ, the means of four dimensions were calculated and then averaged for getting the result. Respondents are asked to select the response that best describes their capabilities using a seven-point Likert-type scale to indicate the extent. Respondents choose the option in the seven-point Likert-type scale ranging from strongly disagree (1) to strongly agree (7).

A list of the items is given in appendix 2

So as not to bias the answers of the respondents, no specific information has been brought up relating the particular content of these four factors. Since the wording of a question may influence the respondent's answer tendency to a certain extent, which can have a dramatic effect on the results (Balnaves and Caputi, 2001)

5.2.3 Team performance

In order to evaluate the team performance of the multicultural diverse teams, this study would use the aggregated measure of team performance in terms of team empowerment, productivity, customer service and cooperation

Team empowerment

Kirkman and Rosen (1999) firstly developed team psychological empowerment scale including four dimensions: team potency, team meaningfulness, team autonomy and team impact. Team potency was evaluated using 8-item team level by Guzzo and colleagues (1993) about the collective extent of agreement of team members that their team had confidence in itself, belief to be extremely good at producing high-quality work, productive and no job was too tough, expectation to be known as high-performing team, and have influence; felling to solve any problems, to get a lot done when working hard. Team meaningfulness was assessed using 6-item individual level measure by Thomas and Tymon's (1993) adapted for team-level, including their team cared about what it did, belief that its work was valuable, its projects were significant, felling that its group purpose was important, its group tasks to be worthwhile, finding that what it was trying to do was meaningful. Team autonomy used 6-item individual level measure by Thomas and Tymon's (1993) adapted in team level. Those items evaluated the extent that team members agreed or disagreed about the capability of the team to select different ways to do its work, determination of how things were done, what things were done, feeling of a sense of freedom in what it did, making its own choices without being told by management and had a lot of choice in what it did. Team impact was analysed with 6-item individual level by Thomas and Tymon's adapted for team level that their team made progress on its projects, had a positive impact on other employees, company customers, accomplished its objectives, performed tasks that mattered to its company, and made a difference in the organization.

Team productivity

6-item measure of team productivity developed by the Kirkman and Rosen (1999) was used directed to team members and external team leaders (i.e. people who were not members) to what extent they agreed or disagreed that the team: meets or

exceeds team goals; completes team tasks on time; makes sure that products and services meet and exceed production standards; responds quickly when problems come up; is a productive team; and successfully overcomes problems that slow down work

Team customer service

We used the Kirkman and Rosen (1999) 5-item measure of team customer service. The items addressed the extent to which team leaders agreed or disagreed that the team: produces high quality products' services; works out customer problems in a timely manner; is very reliable when working on customer requests; follows through on complaints and requests; and provides a satisfactory level of customer service overall.

Team cooperation

We used the Campion, Medsker, and Higgs (1993) 3-item scale. The items addressed the extent to which team members agreed or disagreed that team members: are willing to share information with team members about the work; enhance the communication among people working on the same product; and cooperate to get the work done

5.3 Data collection

This study will use survey research including interviews and questionnaires. Our samples are people who work in muticultural team of mutinational companies in Vietnam.

5.4 Data analysis

All survey responses will be transfered into quantitative data using Excel, and sattistic software STATA will then be used to analyze the data collected.

The particular assumed relationship between CQ and performance of MCTs will be tested by using structural equation modeling. On one hand, structural equation modeling (SEM) is concerned with estimating (linear and non-linear) relationships between 4 factors of CQ. On the other hand, these studies used SEM methodology to test hypotheses on the relationships between MCTs' performance and CQ via the measurement model as well as relationships among 4 factor CQ variables via the structural model.

6. Strengths and weaknesses of the study

After conducting a literature review of this topic, we identify 3 research gaps from the previous one, and should be conducted in our study in order to give a more comprehensive response to this topic. First, the study must extend the present study into the sectors of different industries, include all levels of foreign employees to increase the generalization of results. Secondly, our research will examine performance in teams that are in existence for a long period of time, instead of using student samples like previous ones.

However, the main weakness of this study is that we can not include several determinants of team performance, such as team level of emotional intelligence, cognitive ability, personality, and attitudes to enhance the reliability for results. Furthermore, when using the survey method, dishonest answers or carelessness and stress of the participants can be seen as clear risks. And finally, it may be a challenge to capture data to meaningfully measure all performance issues as we mentioned above.

7. Plan of progression

January	<p>15th - Submit Preliminary Thesis Report</p> <ul style="list-style-type: none"> -Meet Gillian by the end of the month to discuss further plan of the thesis
February	<ul style="list-style-type: none"> -Improve, add and change theories used in the thesis based on feedbacks given and further researches - Specify and finalise the procedures and measures in the methodology - Draft the questionnaire and interview questions - Ensure respondents to be informed about their participation in the study
March	<ul style="list-style-type: none"> - Start to distribute questionnaires to respondents - Contact multinational companies in Vietnam to arrange time for interviews
April	<ul style="list-style-type: none"> - Field trips back to Vietnam to get interviews - Data collection - Analyse and validate the results - Link results to theory
May- August	<ul style="list-style-type: none"> - Meet Gillian for more feedbacks - Continuously write, compare and conclude results, improve the individual sections of the paper until it is complete
September	<p>1st - Hand in the Master Thesis</p>

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Appendix

Appendix 1: The main hypotheses and results of current studies on the influence of CQ on performance of MCTs

Study	Hypothesis	Result
Chen et al. (2011)	Direct effect: CQ positively relates to performance. Specifically, cognitive CQ, meta-cognitive CQ, motivational CQ, and behavior CQ positively relate to performance.	CQ was positively related to performance.
Imai & Gelfand, (2010)	Individuals with higher CQ will have higher cooperative motives than individuals with lower CQ.	CQ had a positive correlation with cooperative motives. Individuals who have greater ability in adapting to situations of cultural diversity also tend to want to be- have more cooperatively in negotiations, compared to individuals who have lower ability in adapting to situations of cultural diversity.
Bücker et al. (2014)	<p>The level of CQ among local host country managers in foreign multinationals is positively associated with communication effectiveness</p> <p>The level of CQ among local host managers in foreign MNEs is positively associated with the level of job satisfaction.</p>	CQ relates positively to job satisfaction, communication effectiveness
Chen&Lin (2013)	<p>Hypothesis 2: Metacognitive CQ directly motivates knowledge sharing.</p> <p>Hypothesis 3: Metacognitive CQ indirectly motivates knowledge sharing through the partial mediation of perceived team efficacy.</p> <p>Hypothesis 4: Cognitive CQ directly motivates knowledge sharing.</p> <p>Hypothesis 5: Cognitive CQ indirectly motivates knowledge sharing through the partial mediation of perceived team efficacy.</p> <p>Hypothesis 6: Motivational CQ directly motivates knowledge sharing.</p> <p>Hypothesis 7: Motivational CQ indirectly motivates</p>	While metacognitive, cognitive, and motivational CQs have direct and positive effects on knowledge sharing, behavioral CQ has no direct influence on knowledge sharing (thus, H2–H4 are supported, but H5 is not supported). Moreover, metacognitive and behavioral CQs have indirect and positive effects on knowledge sharing via the mediation of perceived team efficacy, whereas cognitive and motivational CQs have no indirect effect on knowledge sharing at all (thus, H6 and H9 are supported, but H7 and H8 are not supported).

	<p>knowledge sharing through the partial mediation of perceived team efficacy.</p> <p>Hypothesis 8: Behavioral CQ directly motivates knowledge sharing.</p> <p>Hypothesis 9: Behavioral CQ indirectly motivates knowledge sharing through the partial mediation of perceived team efficacy</p>	
Groves &Feyerherm (2011)	<p><i>Hypothesis 1a:</i> Team cultural diversity will moderate the relationship between leader cultural intelligence and follower ratings of leader performance. The leader cultural intelligence leader performance relationship will be stronger in teams with greater cultural diversity.</p> <p><i>Hypothesis 1b:</i> For culturally diverse teams, leader cultural intelligence will account for unique effects on follower ratings of leader performance beyond the effects of leader emotional intelligence.</p> <p><i>Hypothesis 2a:</i> Team cultural diversity will moderate the relationship between leader cultural intelligence and follower ratings of team performance. The leader cultural intelligence team-performance relationship will be stronger in teams with greater cultural diversity.</p> <p><i>Hypothesis 2b:</i> For culturally diverse teams, leader cultural intelligence will account for unique effects on follower ratings of team performance beyond the effects of leader emotional intelligence.</p>	<p>Leaders with greater CQ demonstrate higher leader performance on culturally diverse work teams compared to culturally homogeneous work teams. These results also indicate that leader CQ explains unique variance in leader performance on diverse teams beyond the effects of leader EQ. Overall, these results provide support for Hypotheses 1a and 1b.</p> <p>Leaders with higher CQ facilitated greater team performance on culturally diverse work teams compared with culturally homogeneous work teams. These results also indicate that leader CQ explains unique variance in team performance on culturally diverse teams beyond the effects of leader EQ. Overall, these results provide support for Hypotheses 2a and 2b.</p>
Adair et al. (2013)	<p><i>Hypothesis 1 (H1):</i> Motivational CQ will lead to a greater degree of shared values in MCTs but to a lesser degree of shared values in culturally homogeneous teams.</p> <p><i>Hypothesis 2 (H2):</i> Behavioral CQ will lead to a greater degree of shared values in MCTs but to a lesser degree of shared values in culturally homogeneous teams.</p> <p><i>Hypothesis 3 (H3):</i> Metacognitive CQ will lead to a greater degree of shared values in MCTs but to a</p>	<p>To interpret the interaction, we graphed the results at high and low levels of motivational CQ, behavioral CQ, the effect at high and low levels of metacognitive CQ respectively</p> <p>Consistent with our prediction, a simple slope analysis revealed that culturally homogeneous teams were less likely to develop shared values when team motivational CQ was high. However, contrary to our predictions, shared values of culturally heterogeneous teams were not</p>

	<p>lesser degree of shared values in culturally homogeneous teams.</p>	<p>influenced by motivational CQ. Thus, H1 was partially supported.</p> <p>Consistent with our prediction, a simple slope analysis revealed that culturally heterogeneous teams were more likely to develop shared values when team behavioral CQ was high. However, contrary to our predictions, shared values of culturally homogeneous teams were not influenced by behavioral CQ. Thus, H2 was partially supported.</p> <p>The pattern of interactions was as predicted for culturally homogeneous and heterogeneous groups. However, simple slope analyses were only marginally significant. Thus, H3 was partially supported.</p>
<p>Moon (2013)</p>	<p><i>Hypothesis 1a.</i> The performance of a team with low cultural diversity will initially perform better than a team with high cultural diversity.</p> <p><i>Hypothesis 1b.</i> The performance rate of a team with high cultural diversity will improve more quickly than the performance rate of a team with low cultural diversity over time.</p> <p><i>Hypothesis 2a.</i> MCTs with a higher level of CQ will initially perform better than MCTs with lower levels of CQ.</p> <p><i>Hypothesis 2b.</i> MCTs with a higher level of CQ will improve performance more quickly than MCTs with lower levels of CQ.</p> <p><i>Hypothesis 3.</i> CQ will moderate the relationship between cultural diversity and MCT's performance. That is, a higher level of team CQ will significantly weaken the negative effect of cultural diversity on initial MCT's performance, and accelerate the rate of improvement in MCT's performance over 15 weeks.</p>	<p>This study concludes that teams differ in both their initial performance levels and their performance trends (rate of changes in performance).</p> <p>This finding provides support for Hypothesis 1a. In addition, the result supports Hypothesis 2a.</p> <p>In other words, teams with a higher level of cultural diversity and CQ improved more quickly than teams with a lower level of cultural diversity and CQ. This finding offers support for Hypothesis 1b. In addition, the results have supported Hypothesis 2b</p> <p>These plots of interaction indicate that higher levels of team CQ is more likely to diminish the adverse effect of cultural diversity on initial team performance, as well as the rate of improvement in performance for both teams over a 15-week period, those with high cultural diversity and with low cultural diversity, supporting Hypothesis 3</p>

Lee & Sukoco (2010)	Hypothesis 1: Expatriate cultural intelligence has a significant and positive influence on (a) expatriate adjustment, (b) cultural effectiveness, and (c) expatriate performance.	The first model is developed to test the effect of CQ on cultural adjustment and performance. The results indicate that CQ has a positive and significant effect on cultural adjustment. Interestingly, CQ has no significant effect on expatriate performance, and thus Hypothesis 1 is only partially supported.
Duff et al. 2012	Hypothesis 1a: Metacognitive intelligence is positively related to task performance. Hypothesis 1b: Behavioural intelligence is positively related to task performance.	Only behavioural intelligence was significantly related to task performance, lending support only to Hypothesis 1b. Hypothesis 2, which suggested that openness was positively related to task performance, was not supported.

Appendix 2: The Cultural Intelligence Scale (CQS)

The Cultural Intelligence Scale (CQS)

Read each statement and select the response that best describes your capabilities.

Select the answer that BEST describes you AS YOU REALLY ARE (1=strongly disagree; 7=strongly agree)

CQ Factor	Questionnaire Items
Metacognitive CQ:	
MC1	I am conscious of the cultural knowledge I use when interacting with people with different cultural backgrounds.
MC2	I adjust my cultural knowledge as I interact with people from a culture that is unfamiliar to me.
MC3	I am conscious of the cultural knowledge I apply to cross-cultural interactions.
MC4	I check the accuracy of my cultural knowledge as I interact with people from different cultures.
Cognitive CQ:	
COG1	I know the legal and economic systems of other cultures.
COG2	I know the rules (e.g., vocabulary, grammar) of other languages.
COG3	I know the cultural values and religious beliefs of other cultures.
COG4	I know the marriage systems of other cultures.
COG5	I know the arts and crafts of other cultures.
COG6	I know the rules for expressing non-verbal behaviors in other cultures.
Motivational CQ:	
MOT1	I enjoy interacting with people from different cultures.
MOT2	I am confident that I can socialize with locals in a culture that is unfamiliar to me.
MOT3	I am sure I can deal with the stresses of adjusting to a culture that is new to me.
MOT4	I enjoy living in cultures that are unfamiliar to me.
MOT5	I am confident that I can get accustomed to the shopping conditions in a different culture.
Behavioral CQ:	
BEH1	I change my verbal behavior (e.g., accent, tone) when a cross-cultural interaction requires it.
BEH2	I use pause and silence differently to suit different cross-cultural situations.
BEH3	I vary the rate of my speaking when a cross-cultural situation requires it.
BEH4	I change my non-verbal behavior when a cross-cultural situation requires it.
BEH5	I alter my facial expressions when a cross-cultural interaction requires it.

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Note. Use of this scale granted to academic researchers for research purposes only.

For information on using the scale for purposes other than academic research (e.g., consultants and non-academic organizations), please send an email to cquery@culturalq.com