FLORIDA INTERNATIONAL UNIVERSITY

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MULTICULTURAL TEAM PERFORMANCE: THE IMPACTS OF LEADER CULTURAL INTELLIGENCE (CQ) AND LEADER-MEMBER EXCHANGE (LMX)

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To: Dean William G. Hardin
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This dissertation, written by Danielle Santos, and entitled Multicultural Team Performance: The Impacts of Leader Cultural Intelligence (CQ) and Leader-Member Exchange (LMX), having been approved in respect to style and intellectual content, is referred to you for judgment.

We have read this dissertation and recommend that it be approved.

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DEDICATION

This dissertation is dedicated with love and gratitude to my family and friends, whose unwavering support made this journey possible. Thank you not only for your constant encouragement, but also for your patience and understanding during the many moments and experiences I had to miss while dedicating myself to this work. Your support, even from a distance, gave me the strength to keep moving forward.

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ABSTRACT OF THE DISSERTATION

MULTICULTURAL TEAM PERFORMANCE: THE IMPACTS OF LEADER CULTURAL INTELLIGENCE (CQ) AND LEADER-MEMBER EXCHANGE (LMX)

by

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As workplaces become more culturally diverse, understanding how to lead multicultural teams effectively is increasingly vital for organizations. However, managing diverse teams presents significant challenges that can impact collaboration, communication, and overall performance. This dissertation explores the impact of leader cultural intelligence (CQ) on multicultural team performance, highlighting the mediating role of leader-member exchange (LMX). Despite increasing demands from industry to understand cross-cultural leadership competencies, empirical research on leader cultural intelligence (CQ) and leader-member relationships remains limited. This study addresses this gap by examining how culturally intelligent leadership behaviors influence team dynamics and outcomes in culturally diverse settings.

Leader cultural intelligence (CQ) refers to a leader's ability to adapt, understand, and effectively manage individuals from diverse cultural backgrounds. Leaders with higher CQ are hypothesized to promote stronger relationships with team members,

resulting in higher-quality leader-member exchange (LMX) that ultimately enhances multicultural team performance. Empowering leadership, which involves encouraging autonomy and participative decision-making, is proposed as a moderator that could strengthen the positive effects of leader CQ on team performance.

A quantitative research design was employed, using validated survey instruments adapted from the Cultural Intelligence Scale (CQS), the Leader-Member Exchange Scale (LMX-7), the Empowering Leadership Questionnaire (ELQ), and established measures of Team Performance. Data were collected from 236 participants working in multicultural teams within the United States, including industries such as healthcare, technology, finance, and education. Confirmatory factor analysis (CFA) and structural equation modeling (SEM) were conducted to validate the constructs and test the hypotheses.

The findings indicate that leader cultural intelligence (CQ) significantly predicts the quality of leader-member exchange (LMX), which positively influences multicultural team performance. This study offers theoretical contributions by advancing the understanding of how leader CQ translates into improved multicultural team outcomes via LMX. It also provides practical implications for organizations seeking to enhance the performance of diverse teams.

Keywords

Leader Cultural Intelligence (CQ), Leader-Member Exchange (LMX), Multicultural Team Performance, Empowering Leadership.

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CHAPTER I

INTRODUCTION

1.1. Overview and Problem Statement

As globalization accelerates, the composition of the workforce is undergoing significant transformation, becoming increasingly diverse across industries, sectors, and regions. According to the Global Estimates on International Migrant Workers (ILO, 2021), the labor force participation rate among the migrant population worldwide was nearly 70 percent in 2019, compared to 60 percent among the non-migrant population. In regions such as North America, as well as Northern, Southern, and Western Europe, migrant workers now represent approximately one in five workers, a figure that continues to rise. There were approximately 170 million migrant workers globally in 2019. In the United States specifically, data from the Bureau of Labor Statistics (BLS) and the American Community Survey (ACS) reveal that, in 2023, 31 million foreign-born workers accounted for 19 percent of the total workforce, participating at a consistently higher rate than their native-born counterparts – with 68 percent of foreign-born individuals aged 25 and older participating in the labor force in 2023, compared to 63 percent of the native-born population. This 5-point difference indicates that a significantly larger share of the foreign-born population is either employed or actively seeking employment. These data suggest that the U.S. labor force is undergoing major changes, not only reflecting a demographic shift but a fundamental reshaping of organizational life and team structures.

This demographic trend is mirrored globally, where the influx of migrant workers enriches the dynamism and skill set of the labor force. Consequently, organizations recognize the value of harnessing diverse cultural perspectives to drive innovation and competitiveness. While companies adapt to this new reality, they are becoming reliant on multicultural teams. As organizations globalize and the workforce becomes more diverse, it is increasingly important to understand why some individuals function more effectively than others in culturally diverse situations (Erez & Earley, 1993; Gelfand, Erez, & Aycan, 2007; Triandis, 1994). The integration of individuals from varied cultural backgrounds fosters a collaborative environment that can tackle complex challenges with creative solutions. As a result, multicultural teams have become prevalent and important in private and public international organizations (Sağa et al, 2016).

Multicultural teams can be defined 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" (Halverson and Tirmizi, 2008). Thus, managing multicultural teams involves effectively and creatively dealing with a variety of challenges that emerge as people from different cultural backgrounds interact with each other to accomplish the team task (Sağa et al, 2016). In addition, global competitive pressures and growth opportunities abroad have created strong demand for managers who are capable of leading work units characterized by significant cultural diversity with respect to team member ethnicity and nationality (Groves and Feyerherm, 2011). The net effect of these trends and challenges is that today's organizations demand global leaders

with the requisite leadership competencies, namely cross-cultural skills or leader cultural intelligence (Ang et al., 2007), that influence performance outcomes in culturally diverse business environments (Roberson & Park, 2007).

Leader cultural intelligence (CQ) is expected to play an essential role in positively influencing team performance, as leaders with high CQ are better equipped to manage cultural differences and create inclusive environments for their teams. Team performance is conceptualized as a multilevel process arising as team members engage in managing their individual- and team-level taskwork and teamwork processes (Kozlowski & Klein, 2000). It is the outcome of all team members collaborating towards a shared goal, which can lead to enhanced productivity, greater customer satisfaction, and increased profitability. Organizations are actively interested in enhancing team performance, that is, the quantity and quality of team output (Rousseau & Aubé, 2010). Therefore, organizational researchers who realize the pivotal effects of work teams on organizational effectiveness have increasingly focused on variability in team performance regarding team level cultural diversity (Earley & Mosakowski, 2000; Nakui, Paulus, & Van der Zee, 2011; Watson, Kumar, & Michaelsen, 1993). By understanding the dynamics and challenges of such teams, organizations can develop strategies to improve collaboration, communication, and problem-solving among team members from different cultural backgrounds.

Previous research shows that multicultural teams can create substantial obstacles to effective teamwork and often generate frustrating management dilemmas (Brett et al., 2016). Cultural differences among team members can cause misunderstandings and poor

performance. Therefore, many ineffective multicultural teams drain resources rather than improve efficiency and generate success (Shenkar & Zeira, 1992). Conducting research on cultural intelligence (CQ) and multicultural team performance can maximize teams potential and ensure that all members are working effectively. Despite clear calls from industry to better understand cross-cultural leadership competencies, academic research on leader cultural intelligence (CQ) is remarkably sparse (Groves and Feyerherm, 2011). This knowledge is expected to support the cultivation of global leaders with the cross-cultural skills necessary to navigate and leverage diversity, thereby improving overall performance outcomes and ensuring competitiveness in the global market.

1.2. Research Questions

This study is guided by two central research questions that seek to address these identified gaps. First, what is the role of Leader-Member Exchange (LMX) in the relationship between Leader Cultural Intelligence (CQ) and Multicultural Team Performance? Second, what is the effect of Leader Cultural Intelligence (CQ) on Multicultural Team Performance, moderated by Empowering Leadership?

These research questions are designed to explore both the direct and mediated relationships between leader CQ and multicultural team performance, while also examining how empowering leadership behaviors may strengthen or attenuate these effects. In doing so, the study aims to provide a more comprehensive understanding of the leadership dynamics that contribute to successful multicultural team outcomes.

1.3. Research Contributions

This research is expected to make several important contributions to both theory and practice. Theoretically, it advances the leadership and organizational behavior literature by empirically examining the relationship between leader cultural intelligence (CQ) and multicultural team performance. By incorporating leader-member exchange (LMX) as a mediating variable and empowering leadership as a moderating variable, this study provides a more nuanced understanding of the mechanisms through which culturally intelligent leadership influences diverse teams.

Practically, the findings of this study will offer actionable insights for organizations seeking to enhance the performance of their multicultural teams. By identifying the leadership behaviors and relational dynamics that promote effective collaboration across cultures, organizations can better design leadership development programs and management strategies that align with the demands of a globalized workforce.

Finally, by promoting more effective multicultural collaboration, this research supports broader societal goals of inclusivity, equity, and global cooperation. Understanding how to build high-performing, diverse teams has implications not only for organizational success but also for fostering more cohesive and inclusive work environments in an increasingly interconnected world.

CHAPTER II

BACKGROUND LITERATURE REVIEW AND THEORY

The importance of studying multicultural teams and their performance has never been more critical. In today's globalized economy, organizations increasingly rely on diverse teams to drive innovation, address complex challenges, and compete in international markets. Conceptually, teamwork is nested within team performance and is a set of interrelated cognitions, attitudes, and behaviors contributing to the dynamic processes of performance (Chen, G, et al., 2007). Assessing team performance continues to pose a significant challenge within the academic sphere due to its multifaceted nature, which presents obstacles to creating a precise measure. For this reason, there is a robust body of literature on this area of measurement to address issues that researchers and practitioners face (Brannick & Prince, 1997; Cooke, Kiekel, & Helm, 2001; Kozlowski & Bell, 2003; Rosen et al., 2012; Wildman et al., 2012). However, only a few studies specifically focus on multicultural team performance with leader cultural intelligence (CQ) and leader-member exchange (LMX) as the central variables. The vast majority of leader CQ publications are conceptual papers (e.g., Alon & Higgins, 2005; Mannor, 2007) or practitioner-oriented books (Livermore, 2010) that exclude presentation of rigorous empirical evidence (Groves and Feyerherm, 2011). According to Meister (1985, p. 123), the purpose of the performance measurement (i.e., team feedback) should determine what will be collected, and what needs to be collected should determine what kinds of resources are being used for the measurement.

Prior studies on 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; Webber & Donahue, 2001). These mixed results are generally classified into three perspectives: the information-processing perspective, the similarity–attraction perspective, and the social categorization perspective (Williams & O'Reilly, 1998). The information-processing perspective posits that diversity brings positive contributions to teams by enhancing their ability to process information and solve problems creatively. In contrast, the similarity–attraction and social identity/social categorization perspectives suggest that diversity negatively affects team outcomes by fostering in-group favoritism and out-group discrimination. Cultural diversity, in particular, is strongly related to all three perspectives through which diversity affects teams (Stahl, Maznevski, Voigt, & Jonsen, 2010). Moreover, a study by Moon, T. (2013) investigated the relative performance changes of multicultural teams (MCTs) over time, as well as the relationship between cultural intelligence (CQ) and performance in MCTs. Based on the three perspectives that diversity in teams can generate both positive and negative effects, the study proposed that cultural diversity has a dual effect on team performance over time (i.e., length of experience with diversity). The results suggested that cultural diversity is negatively associated with initial team performance but is positively related to team performance improvement over time (i.e., performance trend). For this reason, leader-member tenure relationship will also be analyzed as a control variable in this research. Moreover, multicultural team performance will be assessed based on leader cultural intelligence (CQ), with empowering leadership and leader-

member exchange (LMX) serving as moderating and mediating control variables, respectively.

Research indicates that cultural intelligence (CQ) is a crucial factor influencing multicultural team performance. Cultural intelligence (CQ) is not only defined as the capability of an individual to adapt effectively to a new cultural context, but also his or her ability to manage people from different cultural backgrounds (Ang, Van Dyne & Koh, 2006; Ang et al., 2007; Earley & Ang, 2003; Earley, Ang, & Tan, 2006). The development of the cultural intelligence (CQ) construct has filled an important gap in intelligence literature by focusing on people's capabilities in a critical domain for human resource management, namely, the cross-cultural context (Ng, Van Dyne, & Ang, 2009). It enables teams to understand better and appreciate the cultural differences of their members, which can lead to improved communication, collaboration, and problem-solving. Research by Ang et al. (2007) has conceptualized that CQ is a multidimensional construct with four dimensions: metacognitive, cognitive, motivational, and behavioral. Meta-cognitive CQ refers to an individual's mental capability to acquire, be aware of, comprehend, and monitor cultural knowledge. Cognitive CQ refers to declarative knowledge about culture and reflects the specific knowledge of content and mental maps concerning a target culture that is gained through meta-cognitive mechanisms. Motivational CQ reflects individual capability to derive energy and motivation toward learning and developing intercultural competencies. Finally, behavioral CQ refers to the individual capability to display adequate verbal and nonverbal actions in cross-cultural scenarios or environments. As a result, they developed a measurement instrument (CQS)

that has been intensively used by management researchers and exhibits satisfactory reliability and validity levels. Strong CQ capabilities allow leaders to develop a more accurate understanding of the needs and perspectives of their work teams and ultimately establish stronger relationships with culturally diverse team members (Groves and Feyerherm, 2011). 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). Correspondingly, cultural intelligence (CQ) is predicted to enhance performance in multicultural teams, with a deeper understanding of empowering leadership and leader-member exchange (LMX) being invaluable assets for culturally diverse team activities and challenges.

Changes in the business environment brought on by foreign competition, increasing quality and product development demands, and the gradual shift from a manufacturing to a service-oriented economy, have led many organizations to adopt a different approach to the management of work and workers (Jackson and Alvarez, 1992; Johnston and Packer, 1987). The process of implementing conditions that increase employees' feelings of self-efficacy and control (e.g., participative decision-making), and removing conditions that foster a sense of powerlessness (e.g., bureaucracy), has been popularly referred to as empowerment (Arad and Drasgow, 1994). According to Kahn (1990), empowering leadership can improve employees' perception of the identification and valuing of their work, by strengthening their sense of the meaning of their work, which may increase employees perceived psychological rewards from their work. To

measure that, the Empowering Leadership Questionnaire (ELQ) developed by Arnold et al. in 2000 was designed to collect various aspects of empowering leadership behaviors as perceived by employees. The ELQ assesses five critical dimensions of empowering leadership: leading by example, participative decision-making, coaching, informing, and showing concern/interacting with the team. Based on the ELQ, Ahearne et al. (2005) expended the scale for Empowering Leadership behaviors, including how leaders empower their employees by encouraging autonomy, providing meaningful feedback, promoting participation in decision-making, and fostering a supportive environment. Furthermore, a study by Groves and Feyerherm (2011) suggests that team leaders' efforts to empower their members personally (particularly through developing personal relationships with members) are more likely to be effective when they also work at developing an empowering climate that encompasses the team as a whole. Additionally, Kirkman and Rosen's (1999) study shows that team empowerment positively mediates the relationship between leadership climate and team performance. For this reason, empowerment has been identified as an important predictor of performance at both the individual and team levels (Kirkman & Rosen, 1999; Spreitzer, 1995). In the proposed research, empowered leadership will moderate the relationship between leader cultural intelligence (CQ) and multicultural team performance, enhancing the positive effects of CQ by creating a more inclusive and motivating team environment. This moderation is expected to improve collaboration and team performance in multicultural settings. Empowered individuals and teams are motivated to perform well because they have the autonomy and capability to perform meaningful work that can impact their organization (Chen et al., 2007).

Lastly, individual-level research has shown that employees who develop better relationships with their leader (i.e., higher LMX) feel more empowered and, in turn, are more motivated to perform effectively (Chen & Klimoski, 2003; Liden et al., 2000). Leader-member exchange (LMX) is defined as the quality of the social exchange between leaders and followers, characterized by mutual trust, respect, and obligation (Gerstner & Day, 1997). Bauer & Green (1996) research examined the dynamics between leaders and their subordinates, specifically how these relationships evolve and the factors that influence their quality over time. The authors used various established instruments to measure the quality of the leader-member relationships, including the original LMX Scale developed by Scandura and Graen in 1984. The LMX-7 Scale is a widely recognized measure that assesses the quality of the leader-member relationship based on dimensions such as trust, respect, and mutual obligation. In a longitudinal study, Chen and Klimoski (2003) found that newcomers who developed better relationships with their team leaders and team members subsequently performed better, as mediated by newcomer empowerment. In this research proposal, leader-member exchange (LMX) will serve as a mediator between leader cultural intelligence (CQ) and multicultural team performance, reflecting the quality of the relationship between leaders and their team members. LMX is expected to bridge the gap between a leader and the team, enhance trust, and enable leaders with high CQ to better manage and leverage cultural diversity. By mediating this relationship, LMX will help to explain how leader CQ translates into improved performance within multicultural teams. According to Hackman (2002), leaders who create a more motivating climate are expected to also develop positive

relationships with their employees, as team members may be more likely to trust and respect leaders who delegate authority and help the team self-manage.

As organizations continue to expand across borders, the ability of leaders to navigate cultural differences and harness the potential of multicultural teams becomes a significant determinant of success. However, very few empirical studies have examined the unique contribution of leader CQ to perceptual or objective performance outcomes beyond other contemporary leadership competencies, such as emotional intelligence (Chun et al., 2010; Ward et al., 2009). Although Groves and Feyerherm (2011) examined the relationships between leader CQ and team performance on culturally diverse work teams, their study focuses on follower perceptions of leader performance and team performance. In contrast, the present study will investigate the impact of the relationship between leader CQ and multicultural team performance, considering the influence of leader-member exchange (LMX) and empowering leadership on team outcomes. Overall, the CQ literature includes a growing number of empirical studies that examine task performance in culturally diverse settings but very limited theoretical papers and virtually no empirical studies investigating CQ and leadership performance (Groves and Feyerherm, 2011).

This research proposal aims to address this gap by using leader cultural intelligence (CQ) as the primary variable impacting multicultural team performance, given its practical significance for organizations. According to Ott and Michailova (2018), most research on cultural intelligence (CQ) has focused on its outcomes, such as adjustment, performance, and global leadership effectiveness. Consequently, cultural intelligence is an increasingly valuable asset for managers, employees, entrepreneurs, and

organizations (Pidduck et al, 2022). By studying how cultural differences impact team performance, organizations can develop strategies to optimize collaboration and productivity, ultimately leading to greater organizational success and a competitive edge in the global marketplace.

CHAPTER III

RESEARCH DESIGN

The ability to effectively lead multicultural teams has become an essential skill in today's globalized workplace. This chapter outlines the research design for the study, which is grounded in the idea that a leader's cultural intelligence (CQ) and the quality of leader-member exchange (LMX) are pivotal in multicultural environments. These factors are believed to improve the management of diverse perspectives within teams, resulting in a positive impact on team performance.

3.1. Conceptual Framework

The conceptual framework for this study builds on the premise that culturally intelligent leaders are critical in shaping team dynamics and performance, through leader-member exchange (LMX), especially in multicultural settings. Culturally intelligent leaders shape the teamwork context to facilitate team performance by adjusting job characteristics, establishing a team climate of trust and openness to divergent perspectives, and creating a team structure that encourages the sharing of knowledge and

ideas (Mumford et al., 2002; Stewart & Johnson, 2009; Yukl, 2006). These leaders leverage their cultural awareness and adaptive strategies to manage team interactions effectively, ensuring that cultural differences do not hinder team collaboration but instead act as catalysts for creativity and innovation. By establishing a positive leader-member relationship, culturally intelligent leaders enhance team members' sense of belonging and promote the exchange of ideas, which is crucial for improving multicultural team performance.

The proposed research model (Figure 1) aims to empirically test the positive relationship between leader cultural intelligence (CQ) and multicultural team performance, focusing on the mediating role of leader-member exchange (LMX). LMX represents the quality of the relationship between leaders and their team members, which is critical for promoting team trust, commitment, and effective collaboration. The study also considers empowering leadership as a potential moderator, exploring whether empowering leadership behaviors amplify or diminish the influence of leader cultural intelligence (CQ) on team performance. Although previous research has addressed the factors impacting team performance, few studies have specifically examined how leader CQ and leader-member exchange (LMX) interact in multicultural teams. By testing these relationships, this study seeks to contribute new insights into how leader cultural intelligence (CQ) influences team outcomes, enhancing our understanding of leadership effectiveness in multicultural team environments.

Therefore, this research hypothesizes that:

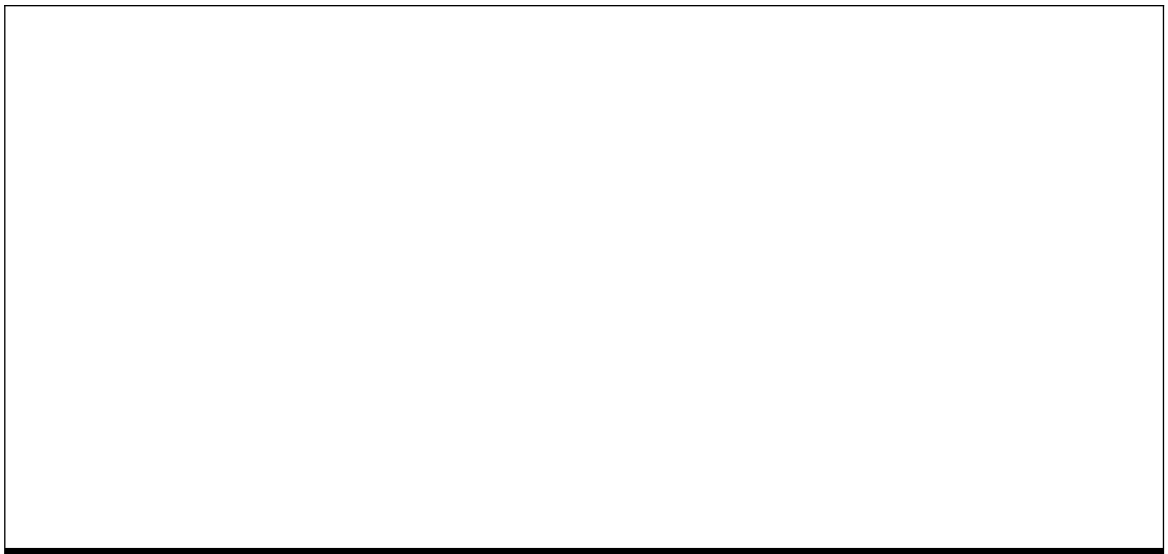

Figure 1 - The Conceptual Research Model

3.2. Constructs

The research model consists of four constructs presented and defined in Table 1.

Construct	Definition	Reference
Leader Cultural Intelligence (CQ)	"Not only defined as the capability of an individual to adapt effectively to a new cultural context, but also his or her ability to manage people from different cultural backgrounds."	Ang, Van Dyne & Koh, 2006; Ang et al., 2007; Earley & Ang, 2003
Leader-Member Exchange (LMX)	"The quality of the social exchange between leaders and followers, characterized by mutual trust, respect, and obligation."	Gerstner & Day, 1997
Empowering Leadership	"The process of implementing conditions that increase employees' feelings of self-efficacy and control (e.g., participative decision-making), and removing conditions that foster a sense of powerlessness (e.g.,	Arad and Drasgow, 1994

	bureaucracy), has been popularly referred to as empowerment."	
Multicultural Team Performance	"A collection of individuals with different cultural backgrounds, who are interdependent in their tasks, who share responsibility for outcomes, and who manage their relationships across organizational boundaries and beyond."	Halverson and Tirmizi, 2008

Table 1 - Construct Definition

3.3. Hypotheses

According to Livermore (2010), a leader's advanced CQ capabilities contribute to leadership effectiveness and performance outcomes on culturally diverse teams vis-à-vis the versatile adaptation of leadership style to cultural values and preferences of followers. Consequently, leaders with higher CQ are likely to be more attuned to the cues of their team members while also remaining acutely aware of their own assumptions when interpreting these signals. Groves and Feyerherm (2011) argue that leader CQ should only be associated with leadership performance in culturally diverse teams and organizations. They also state that despite the growing scholarly attention devoted to CQ in the academic and practitioner literatures, the abovementioned conceptual relationships between leader CQ and leadership performance outcomes have not been tested by enough empirical research; therefore, their study from 2011 was a pioneer in testing this hypothesis. By empirically testing the positive relationship between leader CQ and multicultural team performance, this research can provide valuable insights into how

cultural intelligence directly impacts team outcomes. It will address the growing importance of effective leadership in increasingly diverse and globalized work environments. Additionally, understanding this relationship can help organizations invest in targeted leadership development programs focusing on enhancing CQ, ultimately leading to better team dynamics and performance in culturally diverse settings. For this reason, this study presents the following hypothesis:

> *Hypothesis 1* (H1): There is a positive relationship between Leader Cultural Intelligence (CQ) and Multicultural Team Performance, such that leaders with higher levels of CQ are associated with multicultural teams that exhibit higher performance compared to those led by individuals with lower levels of CQ.

In addition to examining leader performance within multicultural team contexts, this study will explore the impact of leader cultural intelligence (CQ) on leader-member exchange (LMX). As outlined in this research, leader CQ is pivotal in determining how effectively leaders engage with culturally diverse team members. Previous research has shown that CQ helps in dealing with problems from culturally diverse teams by positively affecting interpersonal relationships of trust, global identity, and team member acceptance and integration in MCTs (Flaherty, 2008; Rockstuhl & Ng, 2008; Shokef & Erez, 2008). According to Groves and Feyerherm (2011), strong CQ capabilities allow leaders to develop a more accurate understanding of the needs and perspectives of their work teams and ultimately establish stronger relationships with culturally diverse team members**.** As a consequence, leaders with higher CQ are better equipped to understand, interpret, and respond to the diverse needs and perspectives within their teams. This

heightened sensitivity and adaptability enable them to foster stronger, more effective relationships with team members, leading to enhanced leader-member exchange (LMX). Testing this hypothesis is expected to provide empirical support for the notion that CQ is not just a passive trait but an active contributor to the quality of interactions between leaders and their team members, which is vital for effective leadership in multicultural settings.

> *Hypothesis 2* (H2): There is a positive relationship between Leader Cultural Intelligence (CQ) and Leader-Member Exchange (LMX), such that leaders with higher levels of CQ will positively contribute to enhancing leader-member exchange (LMX).

Leader-member exchange (LMX) is a critical factor in the quality of relationships between leaders and team members, particularly in culturally diverse teams where communication and understanding can be challenging. Given that leaders can develop relationships of different quality with different team members, LMX has been considered an individual-level construct capturing individuals' perceptions regarding the quality of their personal relationship with their team leaders (Gerstner & Day, 1997; Hofmann et al., 2003). Previous research demonstrates the positive effect of leader-member exchange (LMX) on team outcomes. In a longitudinal study, Chen and Klimoski (2003) found that newcomers who developed better relationships with their team leaders and team members subsequently performed better. High-quality LMX relationships are characterized by mutual trust, respect, and obligation, contributing to better communication, collaboration, and overall team cohesion. In multicultural teams, where diversity presents unique

challenges, strong LMX serves as a crucial mechanism for overcoming these obstacles and boosting team performance. Testing this hypothesis is important, as it will provide evidence on how LMX directly impacts the effectiveness and productivity of multicultural teams. Furthermore, it offers insights into how leaders can leverage strong relationships to improve team outcomes, emphasizing the importance of relational dynamics in diverse team environments. As a result, the present study hypothesizes that:

> *Hypothesis 3* (H3): There is a positive relationship between Leader-Member Exchange (LMX) and Multicultural Team Performance, such that higher levels of leader-member exchange (LMX) will positively contribute to enhancing multicultural team performance.

Lastly, beyond examining the positive impact of leader cultural intelligence (CQ) on performance in multicultural teams, this study will explore the role of empowering leadership as a moderator in this relationship. Previous studies have revealed that empowering leadership can have a positive impact on employees' attitudes and behaviors through enhancing the psychological resources of employees in the workplace (Chen et al., 2007). Research by Kirkman and Rosen (1999) demonstrated that team empowerment positively mediated the relationship between leadership climate and team performance. Additionally, Groves and Feyerherm (2011) suggested that team leaders' efforts to empower their members personally (particularly through developing personal relationships with members) are more likely to be effective when they also work at developing an empowering climate that encompasses the team as a whole. Accordingly, empowering leadership creates an environment where team members feel valued and

engaged, allowing leaders with high CQ to better leverage diverse perspectives and drive higher performance. Based on the research presented, the current study is expected to provide empirical evidence on how empowering leadership interacts with leader CQ to influence multicultural team performance. Understanding this dynamic can offer valuable insights for organizations seeking to optimize the performance of culturally diverse teams through targeted leadership strategies.

Hypothesis 4 (H4): Empowering Leadership moderates the relationship between Leader Cultural Intelligence (CQ) and Multicultural Team Performance to strengthen this relationship at higher levels, such that the positive effect of leader cultural intelligence (CQ) on team performance will be stronger under conditions of high empowering leadership

Additionally to these main variables, the research model includes two important control variables: cultural diversity and leader-member exchange (LMX) tenure. By controlling cultural diversity, the study ensures that the observed effects of leader CQ, LMX, and empowering leadership are not confounded by differences in team composition. LMX tenure is the second control variable, which considers how long a leader and team member have worked together. Research shows that longer tenures can lead to stronger leader-member relationships because of trust and familiarity. By controlling LMX tenure, this study ensures that the effects of leader CQ and empowering leadership on team performance are not simply due to long-term relationships between leaders and team members. These control variables help to better isolate the true impact of the main factors on team performance in multicultural settings.

CHAPTER IV

RESEARCH METHODOLOGY

This study will use a quantitative research survey design to empirically investigate the relationships between leader cultural intelligence (CQ), leader-member exchange (LMX), empowering leadership, and multicultural team performance. The primary objective is to explore how leader cultural intelligence impacts multicultural team performance, emphasizing the mediating role of leader-member exchange (LMX) and the moderating effect of empowering leadership. Data will be collected using a structured online survey administered through the FIU Qualtrics platform. The survey will be distributed to participants working in multicultural teams, ensuring that the sample is relevant to the research focus. Structural Equation Modeling (SEM) will be employed to analyze these relationships. SEM allows for the simultaneous assessment of complex relationships between multiple variables and testing of both direct and indirect effects, making it an ideal method for this study. The use of SEM ensures robust statistical analysis and will provide valuable insights into the dynamic interplay between these critical variables in multicultural team settings.

To ensure the validity and reliability of the survey instrument, the research will follow the comprehensive process outlined by Straub (1989), which includes several phases: Phase 1 (Pretest), Phase 2 (Technical Validation), Phase 3 (Pilot Test), and Phase 4 (Full-Scale Survey). In Phase 1, an informed pilot will be conducted with five participants to qualitatively assess the instrument's clarity, ease of understanding, and

any ambiguities. This phase will also evaluate the operational aspects of the survey, including writing quality, features in the Qualtrics platform such as "force response," and the time required to complete the survey. Phases 2 and 3 will be combined into the Quantitative Pilot, where 150 participants will complete the survey. The main objectives in this phase are to verify construct validity, assess reliability using Cronbach's Alpha, and perform exploratory factor analysis to ensure that the constructs are appropriately measured. Finally, in Phase 4, the Main Study will be conducted with the full sample size of 250 participants, with the expectation that the instrument will have no validity or reliability issues. By this stage, all statistical tests and analyses will be rigorously tested and operational. This phased approach ensures the thorough validation of the survey instrument, guaranteeing its effectiveness for the main study.

4.1. Sample

The target population for this study consists of team members who work in culturally diverse teams under the supervision of a direct leader. The sample will include participants from multinational corporations (MNCs), non-governmental organizations (NGOs), and public sector entities that operate within multicultural environments. These sectors are particularly relevant as they often bring together individuals from different cultural backgrounds to collaborate on shared organizational goals, making them ideal for exploring the dynamics of leader cultural intelligence (CQ), leader-member exchange (LMX), and empowering leadership.

To guarantee a reliable and representative sample for the main study, approximately 250 participants will be recruited from various organizations and industries in the United States. Participants will be sourced through LinkedIn and Cloud Research platforms, enabling access to a diverse range of individuals from different professional sectors, such as healthcare, technology, education, finance, and public administration. This method will allow the study to capture a broad spectrum of experiences and perspectives, enhancing the generalizability and diversity of the findings. By including participants from different industries and backgrounds, the research seeks to provide a comprehensive understanding of the relationships between cultural intelligence, leader-member dynamics, and leadership styles in multicultural teams, offering practical understandings to be applied across diverse organizational contexts.

4.2. Measurements

This is an explanatory study, and data will be collected via an online survey distributed through Qualtrics. Participants, selected from LinkedIn based on the target population, will receive an invitation and survey link via email. For Cloud Research participants, access to the survey will be granted directly through their platform login once they choose to participate. The survey will include an informed consent section to ensure that participants understand the study's purpose, their right to confidentiality, and the voluntary nature of their participation. It will also address sensitive topics, such as cultural differences and working relationships, with care to minimize discomfort. To protect participants, the study will adhere to strict ethical standards, ensuring anonymity

and voluntary involvement. No risks are anticipated beyond the usual stress associated with completing an anonymous survey. The research will be conducted with a strong commitment to ethical practices and the well-being of participants.

An extended literature review was conducted to identify the most reliable and validated scales available for measuring cultural intelligence (CQ), leader-member exchange (LMX), empowering leadership, and team performance:

Cultural Intelligence (CQ). Team members will complete measures of leader cultural intelligence (1= strongly disagree; 5= strongly agree) based on the 17-item instrument adapted from the original 20-item Cultural Intelligence Scale (CQS) developed by Ang et al. in 2007 (APPENDIX I). This scale is composed of four subscales: meta cognitive, cognitive, motivational, and behavioral. It is considered a seminal tool in the field and has been extensively employed in both psychological and business research. A sample of items of this scale include "My supervisor adjusts his/her cultural knowledge as he/she interacts with people from a culture that is unfamiliar to him/her", "My supervisor changes his/her verbal behavior (e.g., accent, tone) when a cross-cultural interaction requires it", and "My supervisor enjoys interacting with people from different cultures."

Leader-Member Exchange (LMX). Team members will complete a 7-item measure of leader-member exchange (LMX) using a scale ranging from 1 (strongly disagree) to 5 (strongly agree), adapted from the original LMX-7 measure by Graen and Uhl-Bien (1995) - APPENDIX II. This scale has been widely used in management research, including influential studies by Bauer and Green (1996), and Chen et al. (2007).

Sample items from this scale include statements such as "I would characterize the working relationship I have with my supervisor as extremely effective", "My supervisor recognizes my potential", and “My supervisor understands my job problems and needs.”

Empowering Leadership. Team members will complete measures (1= strongly disagree; 5= strongly agree) of items selected from the original 38-item instrument Empowering Leadership Questionnaire (ELQ) developed by Arnold et al. in 2000 (APPENDIX III). This scale was also used in a robust study by Ahearne et al. in 2005. Sample items from this instrument include “My supervisor leads by example”, “My supervisor involves my work group in decisions that affect us”, and “My supervisor encourages work group members to express ideas and suggestions”.

Team Performance. Team members will assess team performance using a 3-item instrument developed by Heilman, Block, and Lucas (1992) (APPENDIX IV). Participants will rate each item on a scale from 1 (strongly disagree) to 5 (strongly agree). This scale was selected for this research due to its proven effectiveness, as demonstrated in Groves and Feyerherm's (2011) study. Sample items from the instrument 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.” Additionally, four more items were included in the instrument adapted from Kirkman and Rosen (1999) to enhance its effectiveness and ensure more comprehensive results. Sample of the items included are “My team helps to achieve the organization’s mission”, “The quality of work provided by my team is improving over time”, and “Others in the company who interact with my team often complain about how my team functions.”

Controls. In addition to the main constructs, the study will incorporate both individual and team-level control variables. These controls will include gender, country of origin, country of residence, leader-member tenure, team size, and team diversity.

The pilot measurement instrument consists of 52 items adapted from established literature with proven reliability and validity. Participants are expected to spend approximately 15 minutes completing the survey. The questionnaire includes sections on demographics, control variables, and scales for key constructs, enabling team members to assess their leaders (direct supervisors) based on their personal experiences and perspectives. To ensure the quality of responses, two attention-check questions are blended. Responses will be collected using a 5-point Likert scale, where participants rate their level of agreement with each statement, ranging from 1 (strongly disagree) to 5 (strongly agree). After conducting the pilot study and making any necessary adjustments to the instrument, the next phase will involve conducting the main study. This process guarantees a comprehensive evaluation of the key variables while ensuring the consistency and reliability of data collection, ultimately contributing to the robustness of the findings.

CHAPTER V

DATA ANALYSIS

5.1. Informed Pilot

The main objective of the informed pilot is to leverage the expertise of peers and industry professionals to assess the survey instrument before conducting the quantitative study. This initial phase helps to identify potential issues with the survey design and improve the overall quality of the research. The informed pilot was conducted in three main phases: 1) invitation and selection of strategic participants; 2) feedback collection from participants; 3) survey instrument modifications based on the feedback received. These steps are described as following:

1) Invitation and selection of strategic participants: A diverse group of 5 participants was selected for the pilot, consisting of 3 multicultural team members from different industries and 2 academic researchers in Business Administration. These participants were invited via email to complete a pre-test version of the survey using the Qualtrics platform. The invitation provided a clear explanation of the purpose of the pilot study and ensured informed consent. While this group mirrored the characteristics of the target population, it was not representative of the final sample.

2) Participants feedback: After completing the survey, participants were asked to provide feedback on various aspects of the survey, including clarity, ease of understanding, and any challenges they encountered. To gain more in-depth insights, an online meeting was held with each participant individually. Two participants— one from academia and another from a multicultural team— offered valuable feedback, highlighting possible confusion related to the clarity and ambiguity of three specific questions.

3) Instrument modification: Based on the feedback received, the survey instrument was revised to improve the clarity of the three confusing questions. This revision aimed to guarantee better comprehension for respondents. Additionally, the demographics section was reorganized and moved to the end of the survey for a more logical flow. Finally, an extra attention-check question was added to enhance the quality of the responses. These adjustments were made to ensure the instrument's effectiveness for the main study.

5.2. Quantitative Pilot

After completing the informed pilot phase and implementing the necessary adjustments to the instrument, the next step is to conduct a quantitative pilot. The primary objective of this phase is to assess the quality, validity, and reliability of the survey instrument before proceeding to the final phase — the main study. The quantitative pilot study collected data via the Cloud Research platform and had a total of 150 responses. It

was conducted for 10 days, from October 10 to October 20, 2024. This sample was used solely for pilot testing with participants completing the survey through the Qualtrics platform.

The questionnaire comprised a total of 55 questions (APPENDIX V), including 3 check questions to ensure data quality. The questions were divided into five sections: Team Performance (7 items), Leader-Member Exchange LMX (7 items), Empowering Leadership ELQ (10 items), Cultural Intelligence CQ (17 items), and Demographics (11 items). Although Emotional Intelligence (EQ) is not included in the research model, data was collected on this variable for comparative purposes. During this phase, the focus was on evaluating the internal consistency of the scales and examining the preliminary relationships among the variables.

Once the data was collected, an analysis was conducted to identify any patterns, inconsistencies, or issues with the responses, such as ambiguities or confusion in certain questions, which led to inconsistent data. The feedback and data from this study were used exclusively to refine and improve the final version of the survey, ensuring its effectiveness and clarity for the main study. Based on the findings from this quantitative pilot, necessary adjustments will be made to the instrument. These adjustments could include revising specific questions or addressing any identified issues.

5.2.1. Data Cleaning

Data cleaning is an important step that must be conducted carefully before performing any statistical analyses to ensure the quality and accuracy of the results. In

this pilot study, participants who failed the attention-check questions were the primary reason for data exclusion, with 4 participants being removed for not passing these checks. Additionally, participants who completed the survey in less than 6 minutes, when the average completion time was approximately 10 minutes, were excluded. This led to the removal of 2 participants who likely rushed through the survey. After addressing these cleaning factors, 6 responses were removed, leaving a total of 144 participants for analysis in this quantitative pilot study.

Beyond these exclusions, two items (TP6 and TP7) from the Team Performance scale had their codes reversed as initially predicted in the survey instrument. This step ensured that the data were accurate and ready for analysis, maintaining the integrity of the research findings.

5.2.2. Descriptive Analysis

The demographic characteristics of the respondents (N = 144) were analyzed across gender, country of origin, country of residence, participation in culturally diverse team, work modality, leader-member exchange (LMX) tenure, and team size. All participants are white-collar professionals employed by multinational enterprises in the United States. They work in culturally diverse teams and have direct supervisors, making them ideal subjects for examining the dynamics of leadership and team performance in multicultural settings.

Category	Classification	Participants (N)	Percentage (%)
Gender	Men	91	63.19%
	Women	53	36.81%
Country of origin	USA	139	96.53%
	Other	5	3.47%
Country of residence	USA	144	100%
	Other	0	0%
Culturally diverse team	Yes	144	100%
	No	0	0%
Same country of origin as their supervisor	Yes	121	84.03%
	No	23	15.97%
Team size	2 to 5 members	22	15.28%
	5 to 15 members	93	64.58%
	More than 15	29	20.14%
Work modality	In-person	45	31.25%
	Hybrid	73	50.69%
	Remote	26	18.06%
LMX tenure	1 year or less	15	10.42%
	2 to 5 years	81	56.25%
	More than 5 years	48	33.33%

Table 2 Demographic Summary

Regarding gender, the pilot sample is predominantly male, with 63.19% (91 participants) identifying as men, while 36.81% (53 participants) are women. In terms of country of origin, most the participants (96.53%, 139 individuals) are from the United States, with only a small portion (3.47%, 5 participants) coming from other countries.

This highlights the U.S.-centric nature of the study while still allowing for a slight international perspective.

As expected from the research design, every participant resides in the United States (100%, 144 individuals) and works in a culturally diverse team, emphasizing the focus of the study on multicultural teams. When it comes to supervisor-country origin, 84.03% (121 participants) have a supervisor from the same country of origin, while 15.97% (23 participants) report having a supervisor from a different country. This indicates that a significant portion of participants work under cross-cultural leadership, providing insight into the challenges of leader-member dynamics in multicultural settings.

The majority of participants belong to teams with 5 to 15 members (64.58%, 93 participants), with smaller teams of 2 to 5 members accounting for 15.28% (22 participants), and larger teams of more than 15 members making up 20.14% (29 participants). Additionally, the sample consists mainly of participants working in hybrid settings (50.69%, 73 participants), followed by those working in-person (31.25%, 45 participants) and remotely (18.06%, 26 participants). This suggests that hybrid and in-person work modalities are more common among the sample, offering a broad perspective on how work settings may influence team performance and leadership.

Finally, the data on leader-member exchange (LMX) tenure indicates that more than half of the participants (56.25%, 81 individuals) have been working with their supervisors for 2 to 5 years. A smaller portion of the sample (33.33%, 48 participants) has been in their current roles for more than 5 years, while 10.42% (15 participants) report having an LMX tenure of 1 year or less, reflecting a mix of long-term and more

recent leader-member exchanges within the sample. This diverse tenure distribution adds depth to the analysis of leader-member relationships and the impact of leader cultural intelligence (CQ) on multicultural team performance.

5.2.3. KMO and Confirmatory Factor Analysis

The Kaiser-Meyer-Olkin (KMO) test and Confirmatory Factor Analysis (CFA) were conducted on SPSS to assess the adequacy of the data for factor analysis and to validate the measurement model. The KMO test evaluates sampling adequacy, while CFA examines the reliability and validity of the constructs, ensuring that the observed variables accurately represent the latent factors in the model.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.910
Bartlett's Test of Sphericity	Approx. Chi-Square	4336.321
	df	630
	Sig.	<.001

Table 1 KMO and Bartlett's Test

The results of the Kaiser-Meyer-Olkin (KMO) test and Bartlett's Test of Sphericity indicate that the data is highly suitable for factor analysis. The KMO value of 0.910 exceeds the recommended threshold of 0.80, reflecting excellent sampling adequacy and strong intercorrelations among the variables. Additionally, Bartlett's Test of Sphericity was statistically significant ($\chi^2 = 4336.321$, df = 630, $p < .001$), confirming that the correlation matrix is not an identity matrix and that factor analysis is appropriate.

These results provide strong support for proceeding with the validation of the measurement model.

Confirmatory Factor Analysis (CFA)

	Factor						
	1	2	3	4	5	6	7
Empowering ELQ _6	.773						
Leader-Member LMX _2	.758						
Leader-Member LMX _4	.743						
Empowering ELQ _2	.734						
Empowering ELQ _10	.719						
Empowering ELQ _5	.707						
Empowering ELQ _4	.637						
Empowering ELQ _7	.631						
Empowering ELQ _9	.618						
Leader-Member LMX _1	.580						
Empowering ELQ _3	.580						
Leader-Member LMX _7	.579						
Empowering ELQ _8	.572						
Leader-Member LMX _3	.483						
BEH_4		.884					
BEH_5		.877					
BEH_3		.847					

BEH_1		.777					
BEH_2		.777					
COG_2			-.935				
COG_1			-.837				
COG_3			-.743				
COG_4			-.731				
TPF6_recode				.838			
TPF7_recode				.766			
Team Performance TPF_2					-.975		
Team Performance TPF_3					-.907		
Team Performance TPF_1					-.806		
Team Performance TPF_5					-.649		
Team Performance TPF_4					-.475		
MC_3						-.690	
MC_1						-.651	
MC_2						-.633	
MC_4						-.402	
MOT_3							.592
MOT_2							.590

Table 2 Pattern Matrix

The Confirmatory Factor Analysis (CFA) results provide evidence supporting the construct validity of the four main constructs examined in this study: Leader-Member

Exchange (LMX), Empowering Leadership (ELQ), Team Performance, and Leader Cultural Intelligence (CQ). Items from the LMX and ELQ scales largely loaded onto the same factor (Factor 1), indicating some degree of overlap in perceived leadership behaviors by respondents. However, the higher loadings of ELQ items (e.g., ELQ_6 = .773, ELQ_2 = .734) relative to the lower LMX items (e.g., LMX_1 = .580, LMX_3 = .483) suggest that ELQ is more clearly defined within this dimension. This overlap highlights the conceptual proximity between relational and empowering leadership behaviors in practice.

The Leader Cultural Intelligence (CQ) construct was well-differentiated across its four theoretical subdimensions: Behavioral (BEH), Cognitive (COG), Motivational (MOT), and Metacognitive (MC). These subscales loaded distinctly across separate factors (Factors 2, 3, 6, and 7), supporting the multidimensional structure of CQ. For example, BEH items loaded strongly on Factor 2 (e.g., BEH_4 = .884), while COG items loaded highly—but negatively—on Factor 3 (e.g., COG_2 = –.935), due to scale orientation. Likewise, MC items formed a unique factor with moderate to strong loadings (e.g., MC_3 = –.690), and MOT items appeared together on Factor 7 (e.g., MOT_3 = .592), indicating consistency within each subdimension and supporting the validity of the leader cultural intelligence (CQ) framework.

The Team Performance construct emerged clearly and independently, with items loading onto Factor 4, distinct from leadership constructs. Recoded and original items clustered well together, with strong loadings such as TPF_2 = –.975 and TPF6_recode = .838, suggesting good internal coherence. Although some items presented negative

loadings (due to reverse scoring), the consistent pattern supports the one-dimensionality of the team performance scale.

Overall, the factor solution derived through Principal Axis Factoring with Oblimin rotation, which converged in 14 iterations, provides strong evidence that the four constructs—Leader-Member Exchange (LMX), Empowering Leadership (ELQ), Team Performance, and Leader Cultural Intelligence (CQ)—are empirically distinct. The clear and consistent item loadings onto separate factors validate the conceptual boundaries between these constructs and reinforce the theoretical integrity of the research model. These results not only confirm the suitability of the measurement instruments but also provide a solid foundation for proceeding with the Structural Equation Modeling (SEM) analysis to test the hypothesized relationships among variables.

5.2.4. Constructs Reliability

To assess the internal consistency of the measurement instruments used in the study, construct reliability was evaluated through Cronbach's Alpha. This analysis determines how closely related a set of items are within each construct, indicating the extent to which they consistently measure the same underlying concept. High reliability is essential to ensure the accuracy and credibility of the results derived from each scale.

Cultural Intelligence

Cronbach's Alpha	N of Items
.934	18

Table 3 Reliability Statistics - Cronbach's Alpha CQ

Leader-Member Exchange

Cronbach's Alpha	N of Items
.883	7

Table 4 Reliability Statistics - Cronbach's Alpha LMX

Empowering Leadership

Cronbach's Alpha	N of Items
.927	10

Table 5 Reliability Statistics - Cronbach's Alpha ELQ

Team Performance

Cronbach's Alpha	N of Items
.871	7

Table 6 Reliability Statistics - Cronbach's Alpha Team Performance

The reliability analysis demonstrated high internal consistency across all key constructs in the study. Leader Cultural Intelligence (CQ) showed excellent reliability with a Cronbach's Alpha of 0.934, indicating that the items consistently measure the underlying concept of cultural intelligence. Empowering Leadership (ELQ) also exhibited strong reliability ($\alpha = 0.927$), confirming the coherence of items within this construct. Similarly, Leader-Member Exchange (LMX) achieved a robust reliability score of 0.883, and Team Performance demonstrated solid internal consistency with a Cronbach's Alpha of 0.871. All values exceeded the recommended threshold of 0.70, supporting the reliability of the measurement instruments used in the study.

5.2.5. Instrument Adjustments

After conducting the analyses of the initial quantitative pilot study, the constructs Leader-Member Exchange (LMX) and Empowering Leadership (ELQ) showed weak results, primarily due to item overlap identified in the Confirmatory Factor Analysis (CFA). The lack of clear discriminant validity between the two constructs suggested conceptual and measurement redundancy. To address this issue, a second survey study was designed with a specific focus on reassessing and refining the measurement of both constructs. In this second pilot study, the same 7 items from the LMX scale were retained for consistency, while a new set of 7 items from the original 20-item ELQ scale was selected. This time, the ELQ items were drawn exclusively from the "Informing" subdimension, which is conceptually distinct from the relational nature of LMX, thereby minimizing overlap.

This revised instrument consisted of 16 questions, including the LMX (7 items), ELQ–Informing (7 items), and 2 demographic questions. The survey was conducted over five days, from October 25 to October 30, 2024, and had a sample of 40 participants. Following the same data cleaning criteria as the previous study, 5 responses were excluded for being completed in under two minutes, leaving a final sample of 35 valid participants—26 men and 9 women. All respondents were part of the target population: white-collar professionals working in multicultural teams within multinational enterprises in the United States, who also reported to a direct supervisor. This refined approach aimed to ensure greater construct clarity and measurement validity for use in the main study.

Confirmatory Factor Analysis (CFA)

	Factor	
	1	2
Leader-Member LMX _1	.759	
Leader-Member LMX _2	.792	
Leader-Member LMX _3	.770	
Leader-Member LMX _4	.945	
Leader-Member LMX _5	.704	
Leader-Member LMX _6	.843	
Leader-Member LMX _7	.823	
ELQ - Informing _1		.695
ELQ - Informing _2		.716
ELQ - Informing _3		.831
ELQ - Informing _4		.627
ELQ - Informing _5		.742
ELQ - Informing _6		.678
ELQ - Informing _7		.735

Table 7 Pattern Matrix

The Confirmatory Factor Analysis (CFA) results for the constructs Leader-Member Exchange (LMX) and Empowering Leadership (ELQ – Informing dimension) demonstrate good factor structure and validity. All LMX items loaded strongly on Factor 1, with loadings ranging from 0.704 to 0.945, indicating that each item reliably contributes to measuring the same latent construct. Similarly, the ELQ–Informing items loaded on Factor 2, with loadings between 0.627 and 0.831, supporting their

distinctiveness from LMX and internal consistency as a separate construct. The use of Principal Axis Factoring with Oblimin rotation confirmed the two-factor solution and the rotation converged successfully in six iterations. These results provide strong evidence for construct validity and confirm that the LMX and ELQ–Informing constructs are empirically distinct and well-defined in the model.

Cronbach's Alpha	N of Items
.937	7

Table 8 Reliability Statistics - Cronbach's Alpha LMX

Cronbach's Alpha	N of Items
.887	7

Table 9 Reliability Statistics - Cronbach's Alpha ELQ

The reliability tests for both Leader-Member Exchange (LMX) and Empowering Leadership (ELQ) constructs demonstrated high internal consistency. The LMX scale achieved a Cronbach's Alpha of 0.937 across 7 items, indicating excellent reliability and suggesting that the items consistently measure the same underlying construct. Similarly, the ELQ scale produced a Cronbach's Alpha of 0.887 with 7 items, also reflecting strong internal consistency. These results confirm that both scales are statistically reliable and appropriate for evaluating leadership dynamics in the context of multicultural teams.

During the analysis of the quantitative pilot, 7 items were removed due to weak statistical performance — 4 items from the Empowering Leadership scale, 1 item from the Cultural Intelligence scale, and 2 demographic questions. To improve the scope of the study, 4 items from the Emotional Competency Inventory (ECI) developed by Boyatzis, Goleman, & Rhee (2000) were added for comparative purposes, although this construct is not part of the core research model.

In conclusion, this preliminary investigation provided a critical understanding of the clarity, reliability, and validity of the measurement instruments used in this research. Adjustments were made to address initial issues, particularly the refinement of overlapping constructs such as LMX and ELQ. The results from the qualitative pilot confirmed strong internal consistency, discriminant validity, and a solid factor structure across all constructs, ensuring the robustness of the research model. With the questionnaire finalized and the measurement tools verified, the next chapter presents the main study, where the full structural model is tested with a larger and more diverse sample to examine the impact of Leader Cultural Intelligence on Multicultural Team Performance.

5.3. Main Study

The pilot study was conducted to evaluate the validity and reliability of the survey items before the main data collection. This preliminary investigation confirmed the validity of the survey items, ensuring the robustness and appropriateness of the questionnaire for the main study. The final questionnaire (APPENDIX XI) consisted of

52 questions, including 3 attention check items designed to ensure data quality and response reliability. The survey was structured into six distinct sections: Team Performance (7 items), Leader-Member Exchange – LMX (7 items), Empowering Leadership (6 items), Cultural Intelligence – CQ (16 items), Emotional Intelligence – EQ (4 items), and Demographics (9 items). Each section was selected to measure key constructs relevant to the study, with validated scales used to maintain consistency and reliability. While Emotional Intelligence (EQ) was incorporated in the final version of the questionnaire, it serves as a comparative construct to explore potential overlaps and is not included in the final research model. Its inclusion helps reinforce the distinctiveness of the primary variables and provides additional context for understanding leadership behavior in multicultural teams.

The main survey was administered from November 15, 2024, to January 15, 2025, through the Qualtrics platform. Initially, 248 responses were collected; however, 8 participants were removed for failing at least one of the three attention-check questions. Additionally, 4 respondents were excluded for completing the survey in less than 5 minutes, while the average completion time was approximately 8 minutes. In total, 12 responses were discarded to ensure the integrity and reliability of the data. The final dataset consisted of 236 valid responses from participants who are members of multicultural teams within organizations. These participants were recruited via LinkedIn and Cloud Research platforms, providing a diverse and relevant sample for the study.

In addition to the data cleaning process, two items from the Team Performance scale (TP6 and TP7) were reverse-coded, as initially planned in the survey design, to maintain consistency in the direction of responses across all items.

5.3.1. Descriptive Analysis

The demographic characteristics of the respondents (N = 236) were examined across several variables, including gender, country of origin, country of residence, participation in multicultural teamwork, work modality, leader-member exchange (LMX) tenure, and team size. All participants work within culturally diverse teams in the United States and have direct supervisors. These teams consist of individuals from different cultural backgrounds and nationalities. The respondents come from a variety of industries, including White Collar professions (e.g., accountants, software developers, human resources managers, marketing analysts, public safety personnel), the Service Industry (e.g., retail workers, servers, hotel staff, flight attendants, food service workers, personal care providers, animal/veterinary care, leisure and hospitality), and Professional fields (e.g., doctors, lawyers, professors, engineers, nurses, healthcare workers). These participants represent a broad range of occupations and industries, highlighting the diversity of the sample.

Category	**Classification**	**Participants (N)**	**Percentage (%)**
Gender	Men	155	65.68%
	Women	81	34.32%

Country of origin	United States	224	94.92%
	Other	12	5.08%
Country of residence	United States	236	100%
	Other	0	0%
Culturally diverse team	Yes	236	100%
	No	0	0%
Same country of origin as their supervisor	Yes	166	70.34%
	No	70	29.66%
Team size	2 to 5 members	46	19.49%
	5 to 15 members	134	56.78%
	More than 15	56	23.73%
Work modality	In-person	77	32.63%
	Hybrid	73	30.93%
	Remote	86	36.44%
LMX tenure	1 year or less	49	20.76%
	2 to 5 years	126	53.39%
	More than 5 years	61	25.85%

Table 10 Demographic Summary

The data reveals that most of the participants in this study are men, with 65.68% (155 participants), while 34.32% (81 participants) are women. Regarding country of origin, the overwhelming majority of participants are from the United States (94.92%, 224 participants), with only 5.08% (12 participants) coming from other countries, which still reflects the U.S.-centric nature of the sample. All participants (100%, 236 individuals) reside in the United States, ensuring the study focuses on multicultural teams within the country.

The research also shows that regarding whether participants have the same country of origin as their supervisor, 70.34% (166 participants) share the same country of origin as their supervisor, while 29.66% (70 participants) have a supervisor from a different country, suggesting a mix of domestic and cross-cultural leadership.

For team size, the largest group of participants belongs to teams with 5 to 15 members, comprising 56.78% (134 participants). Teams with more than 15 members account for 23.73% (56 participants), while 19.49% (46 participants) belong to smaller teams of 2 to 5 members. This distribution allows for the examination of leadership dynamics in different team structures. In terms of work modality, the distribution is relatively even, with 36.44% (86 participants) working mostly remotely, 32.63% (77 participants) working mostly in-person, and 30.93% (73 participants) mostly in hybrid work settings, highlighting the varied work environments in which participants are engaged.

Finally, the leader-member exchange (LMX) tenure presents that half of the participants (53.39%, 126 individuals) have been working with their supervisor for 2 to 5 years, while 25.85% (61 participants) have been in their roles for more than 5 years, and 20.76% (49 participants) have an LMX tenure of 1 year or less. This range of tenure provides insight into the different stages of leader-member relationships, providing a more nuanced analysis of how leader-member exchange (LMX) influences multicultural team performance based on the duration of the relationship.

5.3.2. Confirmatory Factor Analysis (CFA)

The Confirmatory Factor Analysis (CFA) was performed on Smart PLS 4 to confirm the validity of the measurement model. Construct reliability and discriminant validity were assessed using Cronbach's Alpha, Composite Reliability (CR), and the Heterotrait-Monotrait Ratio (HTMT). These analyses ensure that the constructs demonstrate internal consistency and are empirically distinct from one another, supporting the overall validity and reliability of the measurement model.

	Cronbach's alpha	**Composite reliability (rho_a)**	**Composite reliability (rho_c)**	**Average variance extracted (AVE)**
Empowering Leadership ELQ	0.917	0.936	0.912	0.642
Leader CQ	0.932	0.952	0.904	0.412
Leader-Member Exchange LMX	0.928	0.931	0.929	0.651
Multicultural Team Performance	0.921	0.922	0.92	0.699

Table 11 Construct Reliability and Validity

The results indicate strong construct reliability across all variables. Cronbach's Alpha and Composite Reliability (ρ_a and ρc) values for all constructs exceed the recommended threshold of 0.70, confirming high internal consistency. Empowering Leadership (ELQ), Leader Cultural Intelligence (CQ), Leader-Member Exchange (LMX), and Multicultural Team Performance all demonstrate reliable measurement. In terms

of convergent validity, the Average Variance Extracted (AVE) values for most constructs exceed the recommended 0.50 threshold, except for Leader CQ, which shows a slightly lower AVE of 0.412. This suggests that while all constructs are reliable, the items measuring Leader CQ explain slightly less variance in their latent factor compared to the others and may benefit from further refinement.

	ELQ	**Leader CQ**	**Leader-Member LMX**	**MC Team Performance**	**ELQ x Leader CQ**
Empowering Leadership ELQ					
Leader CQ	0.456				
Leader-Member Exchange LMX	0.673	0.394			
Multicultural Team Performance	0.41	0.29	0.63		
Empowering ELQ x Leader CQ	0.344	0.115	0.265	0.148	

Table 12 Discriminant Validity (HTMT)

The HTMT (Heterotrait-Monotrait) ratio results indicate satisfactory discriminant validity among all constructs. All HTMT values fall well below the commonly accepted threshold of 0.85, suggesting that each construct is empirically distinct from the others. The highest HTMT value is between Leader-Member Exchange LMX and Empowering Leadership ELQ (HTMT = 0.673), which is still within acceptable limits. These findings

support the conclusion that the constructs used in the model measure separate and conceptually distinct aspects of leadership and team performance.

5.3.3. Structural Equation Modeling (SEM)

Bootstrapping analyses were conducted in SmartPLS 4 to assess the statistical significance of PLS-SEM results, including path coefficients, outer weights, Cronbach's alpha, HTMT, and R^2 values. Bootstrapping involves generating random subsamples from the original dataset to approximate the sampling distribution. To ensure robust estimates, 5,000 bootstrap subsamples were used. A two-tailed significance test was applied, influencing p-value calculations. The significance level was set at 5% ($\alpha = 0.05$), corresponding to a 95% confidence interval for parameter testing.

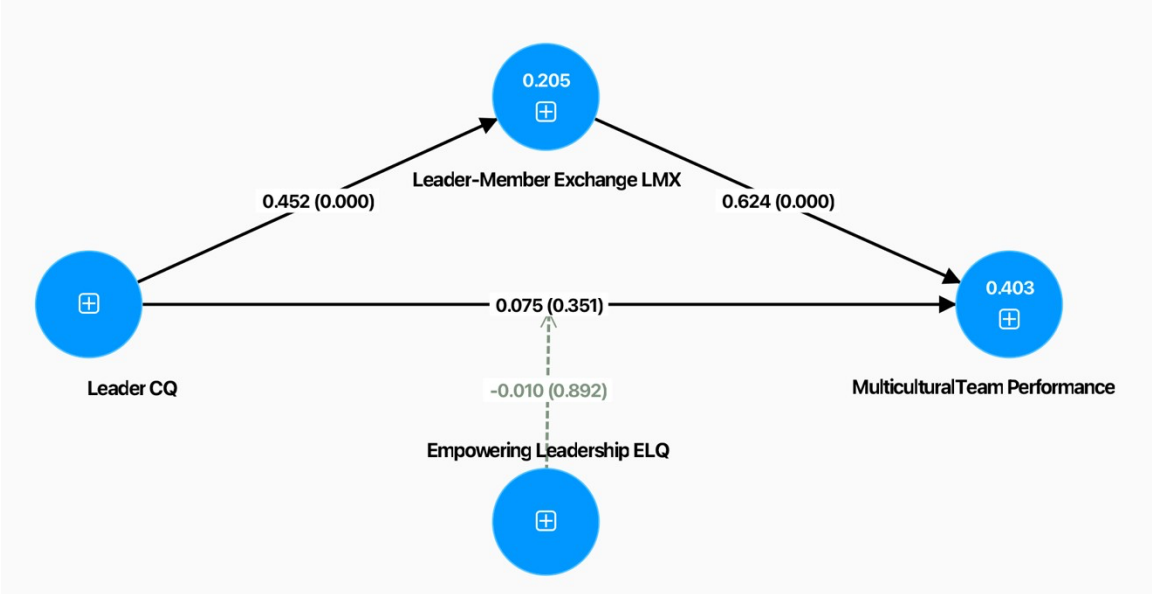

Figure 2 - Model Consistent PLS-SEM bootstrapping

The model shows good explanatory power for the key outcomes. Leader-Member Exchange (LMX) has an R^2= 0.205 (20.5% of variance explained by leader CQ), and Multicultural Team Performance has an R^2= 0.403 (40.3% of variance explained by the combined predictors: leader CQ, LMX, empowering leadership, and their interaction). This means the model explains about 40% of the variation in multicultural team performance, which is a substantial portion for social science research.

	R-Square	R-Square Adjusted
Leader-Member LMX	0.205	0.201
Team Performance	0.403	0.392

Table 13 R-Squared Values

Multicollinearity Assessment

Multicollinearity was evaluated using Variance Inflation Factor (VIF) values calculated via the PLS Algorithm in SmartPLS. Following the guidelines of Hair et al. (2019), VIF values below 5 indicate that multicollinearity is not problematic.

	VIF
BEH_1	2.843
BEH_2	3.542
BEH_3	3.492
BEH_4	4.486
BEH_5	2.697
COG_1	3.074

COG_2	3.315
COG_3	2.772
COG_4	3.762
Empowering ELQ _1	2.861
Empowering ELQ _2	3.068
Empowering ELQ _3	2.442
Empowering ELQ _4	2.277
Empowering ELQ _5	2.313
Empowering ELQ _6	2.795
Leader-Member LMX _1	2.383
Leader-Member LMX _2	3.107
Leader-Member LMX _3	1.979
Leader-Member LMX _4	3.236
Leader-Member LMX _5	2.426
Leader-Member LMX _6	2.763
Leader-Member LMX _7	3.545
MC_1	3.019
MC_2	3.192
MC_3	3.299
MC_4	2.735
MOT_1	2.122
MOT_2	2.422
MOT_3	2.475
Team Performance TPF_1	3.765
Team Performance TPF_2	3.323
Team Performance TPF_3	4.452
Team Performance TPF_4	2.468
Team Performance TPF_5	2.021
Empowering ELQ _ x Leader CQ	1.000

Table 14 Multicollinearity Assessment (VIF Values)

	VIF
Empowering ELQ -> Team Performance	2.150
Leader CQ -> Leader-Member LMX	1.000
Leader CQ -> Team Performance	1.393
Leader-Member LMX -> Team Performance	1.909
Empowering ELQ x Leader CQ -> Team Performance	1.169

Table 15 Inner Model (VIF Values)

The Variance Inflation Factor (VIF) values for all predictor variables in the model range from 1.000 to 2.150, well below the commonly accepted threshold of 5. These results indicate that there are no issues of multicollinearity among the constructs, and each predictor contributes uniquely to explaining variance in the dependent variables.

Path Coefficients

Path coefficients indicate the strength and direction of relationships between independent and dependent variables. To evaluate their statistical significance, a bootstrapping procedure with 5,000 resamples was performed.

	Path coefficients
Empowering ELQ -> Multicultural Team Performance	-0.035
Leader CQ -> Leader-Member LMX	0.452

Leader CQ -> Multicultural Team Performance	0.075
Leader-Member LMX -> Team Performance	0.624
Empowering ELQ x Leader CQ -> Team Performance	-0.010

Table 16 Path Coefficients

The path coefficient results show that Leader Cultural Intelligence (CQ) has a strong positive effect on Leader-Member Exchange (LMX) ($\beta = 0.452$) and a small positive effect on Multicultural Team Performance ($\beta = 0.075$). Leader-member exchange (LMX), consequently, has a substantial positive impact on Multicultural Team Performance ($\beta = 0.624$), highlighting its central role in the model. In contrast, Empowering Leadership has no meaningful moderating influence.

Hypothesis Testing

Hypothesis 1 (H1) – Leader Cultural Intelligence (CQ) positively impacts Multicultural Team Performance: $\beta = 0.075$; $p > 0.05$. The direct effect of leader cultural intelligence (CQ) on multicultural team performance is positive but not statistically significant. Therefore, higher cultural intelligence in leaders did not directly lead to significantly better team performance in the model. However, it is worth noting that leader CQ does influence multicultural team performance indirectly through leader-member LMX (mediated effect $\beta\_indirect \approx 0.282$, $p < 0.01$ – see H2/H3), suggesting that leader cultural intelligence (CQ) improves performance via better leader-member relationships rather than by itself.

Hypothesis 2 (H2) – Leader Cultural Intelligence (CQ) **positively impacts** ***Leader-Member Exchange (LMX):*** $\beta = 0.452$; $p < 0.001$. Leader Cultural Intelligence CQ has a strong positive effect on Leader-Member Exchange (LMX) quality, and this relationship is highly significant. Practically, leaders with higher cultural intelligence tend to form significantly higher-quality relationships with their team members. This result confirms that culturally intelligent leaders are better at developing mutual understanding and trust (high LMX) in multicultural teams.

Hypothesis 3 (H3) – Leader-Member Exchange (LMX) **positively impacts** ***Multicultural Team Performance:*** $\beta = 0.624$; $p < 0.001$. Leader-member exchange (LMX) has a strong positive impact on multicultural team performance, and this effect is highly significant. In other words, teams perform much better when leaders and members have high-quality exchanges (strong working relationships). This finding highlights leader-member exchange (LMX) as a critical driver of team effectiveness in a multicultural setting. Together with hypothesis 2 (H2), it also implies that leader cultural intelligence (CQ) can boost multicultural team performance indirectly by first improving leader-member exchange (LMX). As noted above, the relationships between leader CQ, leader-member exchange (LMX) and Team Performance yields a significant indirect effect (about 0.28).

Hypothesis 4 (H4) – The moderating Effect of Empowering Leadership on Leader Cultural Intelligence (CQ) **positively impacts Multicultural *Team Performance:*** $\beta = -0.010$; $p > 0.05$. The interaction between Empowering Leadership and Leader Cultural Intelligence (CQ) on multicultural team performance is not significant. This indicates that empowering leadership did not significantly change (moderate) the relationship between leader CQ and multicultural team performance. In practical terms, whether a leader used a more empowering leadership style or not, it did not strengthen or weaken the direct effect of leader CQ on performance. The non-significant interaction suggests no evidence of moderation – the influence of leader CQ on team outcomes was consistent regardless of empowerment level.

Additionally, the two control variables - leader-member exchange (LMX) tenure and cultural diversity - did not exhibit a significant impact on the overall model results, indicating that their inclusion did not meaningfully alter the relationships among the key constructs. Moreover, the relationship between Emotional Intelligence (EQ) and Multicultural Team Performance was found to be non-significant in the comparison. Several items from the EQ scale overlapped with those of Cultural Intelligence (CQ), suggesting potential redundancy between the two constructs. This overlap may have contributed to the lack of a distinct effect of EQ on team performance, highlighting the need for further refinement in differentiating the two variables.

These findings underscore the pivotal role of leader-member exchange in translating a leader's cultural intelligence into tangible team performance outcomes while

empowering leadership did not show the expected amplifying effect on this particular relationship. The results suggest that to improve multicultural team performance, developing high leader-member exchange (LMX) is crucial, whereas simply having an empowering leadership style may not be sufficient to strengthen the leader cultural intelligence (CQ) and team performance relationship.

5.3.4. Additional Analyses

To explore additional factors that may influence the relationships in the research model, Multi-Group Analyses (MGA) were conducted based on work modality, team size, and cultural similarity between leaders and team members. The analyses compared differences in path coefficients across respondent groups and assessed their statistical significance, offering insights into how contextual variables shape leadership dynamics and multicultural team performance.

Work Modality

To examine how work modality influences the effectiveness of leadership behaviors, a multi-group analysis was conducted comparing remote, hybrid, and in-person teams. The analysis focused on differences in key structural paths to assess how leadership dynamics and their impact on team performance vary across these contexts.

	Difference (In person vs Hybrid)	**2-tailed** (In person vs Hybrid) p value

Empowering ELQ -> Team Performance	-0.28	0
Leader CQ -> Leader-Member LMX	0.249	0.091
Leader CQ -> Team Performance	0.219	0
Leader-Member LMX -> Team Performance	-0.057	0
Empowering ELQ x Leader CQ -> Team Performance	-0.112	0

Table 17 Bootstrap MGA – Path coefficients in-person vs hybrid

The comparison between in-person and hybrid work modalities revealed several significant differences in leadership effects on team outcomes. Empowering Leadership had a significantly stronger effect on Multicultural Team Performance in in-person teams ($\Delta = -0.28$, $p = 0.00$), while Leader Cultural Intelligence (CQ) had a stronger impact on Multicultural Team Performance in hybrid teams ($\Delta = 0.219$, $p = 0.00$). A marginally significant difference was observed in the leader CQ to LMX path ($\Delta = 0.249$, $p = 0.091$), suggesting a potential trend toward greater influence of leader CQ on relationship quality in hybrid teams. Additionally, small but significant differences were found in the paths from LMX to Team Performance and the leader CQ to Empowering Leadership interaction, though the practical effects may be limited.

	Difference (Remote vs In person)	**2-tailed** (Remote vs In person) p value
Empowering ELQ -> Team Performance	-0.212	0
Leader CQ -> Leader-Member LMX	-0.256	0.008
Leader CQ -> Team Performance	0.178	0
Leader-Member LMX -> Team Performance	-0.027	0

Empowering ELQ x Leader CQ -> Team Performance	0.135	0

Table 18 Bootstrap MGA – Path coefficients remote vs in-person

The comparison between remote and in-person teams revealed significant differences across all model paths. Empowering Leadership had a stronger effect on Multicultural Team Performance in in-person teams ($\Delta = -0.212$, $p = 0.00$), while Leader Cultural Intelligence (CQ) had a significantly greater impact on Team Performance in remote teams ($\Delta = 0.178$, $p = 0.00$). The path from CQ to Leader-Member Exchange (LMX) was also significantly stronger in in-person teams ($\Delta = -0.256$, $p = 0.008$), suggesting that face-to-face interaction enhances the development of leader-member relationships. Additionally, small but statistically significant differences were found in the paths from LMX to Team Performance and the leader CQ to Empowering Leadership interaction, indicating that the influence of these leadership factors varies meaningfully across work modalities.

	Difference (Remote vs - Hybrid)	**2-tailed** (Remote vs Hybrid) p value
Empowering ELQ -> Team Performance	-0.492	0
Leader CQ -> Leader-Member LMX	-0.008	0.748
Leader CQ -> Team Performance	0.397	0
Leader-Member LMX -> Team Performance	-0.084	0

Empowering ELQ x Leader CQ -> Team Performance	0.023	0

Table 19 Bootstrap MGA – Path coefficients remote vs hybrid

The comparison between remote and hybrid teams revealed several significant differences in leadership effects on multicultural team performance. Empowering Leadership had a much stronger positive impact on Team Performance in hybrid teams compared to remote teams ($\Delta = -0.492$, $p = 0.00$), while Leader Cultural Intelligence (CQ) had a significantly greater effect on Team Performance in remote settings ($\Delta = 0.397$, $p = 0.00$). The influence of Leader-Member Exchange (LMX) on Team Performance was also stronger in hybrid teams ($\Delta = -0.084$, $p = 0.00$). However, the path from leader CQ to LMX showed no significant difference ($p = 0.748$), indicating that leader CQ influenced relationship quality similarly across both modalities. The interaction between Empowering Leadership and CQ also showed a statistically significant but very small difference, suggesting minimal practical impact.

Across all three comparisons — in-person vs. hybrid, remote vs. in-person, and remote vs. hybrid — the effect of Leader Cultural Intelligence (CQ) on Multicultural Team Performance consistently differed, being stronger in remote and hybrid teams. Additionally, Empowering Leadership had a significantly greater impact on Team Performance in in-person and hybrid settings compared to remote. The only significant difference in the leader CQ to LMX path occurred between remote and in-person teams, suggesting face-to-face interaction enhances the development of high-quality leader-member relationships. These results suggest that leadership strategies should be tailored

to the work modality, with empowering leadership being more effective in traditional settings and cultural intelligence playing a critical role in remote and hybrid teams. Overall, context plays a meaningful role in shaping how leadership dynamics influence multicultural team performance.

Team Size

To explore how team size influences leadership dynamics and multicultural team performance, a multi-group analysis was conducted comparing small (2–5 members), medium (5–15 members), and large teams (more than 15 members). The analysis examined differences in key structural paths across the three groups.

	Difference (Small vs Large Teams)	**2-tailed** (Small vs Large) p value
Empowering ELQ -> Team Performance	0.459	0
Leader CQ -> Leader-Member LMX	-0.286	0
Leader CQ -> Team Performance	-0.245	0
Leader-Member LMX -> Team Performance	-0.377	0
Empowering ELQ x Leader CQ -> Team Performance	-0.175	0

Table 20 Bootstrap MGA – Path coefficients small vs large

The comparison between small teams (from 2 to 5 members) and large teams (more than 15 members) revealed significant differences across all model

paths. Empowering Leadership had a much stronger effect on Team Performance in small teams ($\Delta = 0.459$, $p = 0.00$), suggesting that empowerment strategies are more impactful in more intimate team settings. In contrast, Leader Cultural Intelligence (CQ) had significantly greater effects on both Leader-Member Exchange (LMX) and Multicultural Team Performance in large teams ($\Delta = –0.286$ and $–0.245$, respectively; $p = 0.00$), indicating that leader CQ becomes more critical as team size increases. Additionally, the path from LMX to Team Performance was significantly stronger in larger teams ($\Delta = –0.377$, $p = 0.00$), emphasizing the importance of strong leader-member relationships in managing larger groups. The interaction between Empowering Leadership and CQ also had a stronger effect in larger teams ($\Delta = –0.175$, $p = 0.00$), suggesting that the combined influence of these leadership qualities is more relevant in complex, large-team environments.

	Difference (Small vs Medium Teams)	**2-tailed** (Small vs Medium) p value
Empowering ELQ -> Team Performance	0.154	0
Leader CQ -> Leader-Member LMX	-0.146	0
Leader CQ -> Team Performance	-0.487	0
Leader-Member LMX -> Team Performance	0.048	0
Empowering ELQ x Leader CQ -> Team Performance	-0.071	0

Table 21 Bootstrap MGA – Path coefficients small vs medium

The comparison between small and medium-sized teams (5 to 15 members) revealed significant differences across all model paths. Empowering Leadership had a stronger positive effect on Team Performance in small teams (Δ = 0.154, p = 0.00), highlighting its greater influence in more intimate team settings. Conversely, Leader Cultural Intelligence (CQ) had a significantly stronger effect on both Leader-Member Exchange (LMX) and Multicultural Team Performance in medium-sized teams (Δ = –0.146 and –0.487, respectively; p = 0.00), suggesting that CQ becomes increasingly important as team size grows. The LMX to Team Performance path showed a small but significant difference favoring small teams (Δ = 0.048, p = 0.00), while the interaction between Empowering Leadership and CQ had a stronger effect in medium teams (Δ = –0.071, p = 0.00). Overall, the results indicate that leadership dynamics vary meaningfully depending on team size, with empowerment playing a larger role in small teams and cultural intelligence becoming more impactful as teams grow.

	Difference (Medium - vs Large Teams)	**2-tailed** (Medium vs Large) p value
Empowering ELQ -> Team Performance	0.305	0
Leader CQ -> Leader-Member LMX	-0.14	0.143
Leader CQ -> Team Performance	0.242	0
Leader-Member LMX -> Team Performance	-0.426	0
Empowering ELQ x Leader CQ -> Team Performance	-0.105	0

Table 22 Bootstrap MGA – Path coefficients medium vs large

The comparison between medium-sized teams (5–15 members) and large teams (more than 15 members) revealed several significant differences. Empowering Leadership had a significantly stronger effect on Team Performance in medium teams ($\Delta = 0.305$, $p = 0.00$), indicating that empowerment is more effective in moderately sized groups. Similarly, the direct effect of Leader Cultural Intelligence (CQ) on Team Performance was also stronger in medium teams ($\Delta = 0.242$, $p = 0.00$). In contrast, the path from Leader-Member Exchange (LMX) to Team Performance was significantly stronger in large teams ($\Delta = –0.426$, $p = 0.00$), suggesting that LMX plays a more central role in driving performance as team size increases. The interaction effect between Empowering Leadership and CQ was also stronger in large teams ($\Delta = –0.105$, $p = 0.00$). The CQ to LMX path showed no significant difference ($p = 0.143$), indicating a similar influence across both team sizes.

The findings show that team size significantly affects leadership dynamics and team performance. In smaller teams (2-5 members), Empowering Leadership has a stronger impact on performance, while in larger teams (more than 15 members), Leader Cultural Intelligence (CQ) becomes more important for both LMX and team performance. LMX also plays a greater role in larger teams, highlighting the importance of strong leader-member relationships. Additionally, the interaction between Empowering Leadership and CQ is more influential in larger teams, suggesting that a combination of these leadership traits is more effective in complex environments.

Cultural Dynamics – Supervisor vs Team Members

The multi-group analysis based on cultural similarity between team members and their supervisors revealed notable differences in how leadership dynamics affect team outcomes.

	Difference (Different culture than supervisor vs Same culture as supervisor)	**2-tailed** (Different culture than supervisor vs Same culture as supervisor) p value
Empowering ELQ -> Team Performance	0.211	0
Leader CQ -> Leader-Member LMX	0.166	0.107
Leader CQ -> Team Performance	-0.187	0
Leader-Member LMX -> Team Performance	-0.032	0
Empowering ELQ x Leader CQ -> Team Performance	0.006	0

Table 23 Bootstrap MGA – Path coefficients Different vs Same Culture

The comparison between team members from a different culture than their supervisor and those from the same culture revealed several statistically significant differences. Empowering Leadership had a stronger effect on Multicultural Team Performance when team members differed culturally from their supervisor (Δ = 0.211, p = 0.00), suggesting that empowerment may be especially impactful in cross-cultural contexts. Conversely, the direct effect of Leader Cultural Intelligence (CQ) on Multicultural Team Performance was stronger when team members shared the same culture as their supervisor (Δ = –0.187, p = 0.00). Small but significant differences were also found in the paths from LMX to Team Performance and the interaction term,

though the differences were minor. The CQ to LMX path showed no significant difference ($p = 0.107$), indicating that leader cultural intelligence (CQ) influenced leader-member exchange (LMX) similarly regardless of cultural similarity.

The findings suggest that Empowering Leadership is more effective in improving Multicultural Team Performance when team members and supervisors come from different cultures, highlighting its value in cross-cultural contexts. In contrast, Leader Cultural Intelligence (CQ) has a stronger impact on performance when team members share the same culture as their supervisor. The leader CQ to LMX path showed no significant differences based on cultural similarity, indicating that Leader Cultural Intelligence (CQ) influences leader-member relationships similarly, regardless of cultural background.

To conclude, the final data analysis demonstrated a clear and meaningful relationship between leadership factors and multicultural team performance. Leader Cultural Intelligence (CQ) significantly impacted the quality of leader-member relationships (LMX), which consequently had a strong positive effect on multicultural team performance. While the direct effect of leader cultural intelligence (CQ) on performance was weak, its indirect influence through leader-member exchange (LMX) proved to be meaningful. Empowering Leadership did not moderate the relationship between leader CQ and multicultural team performance as expected, and its direct effect on performance was minimal. Multi-group analyses further revealed that the effectiveness of leadership behaviors varied depending on team size, work modality, and

cultural similarity between leaders and team members. These findings emphasize the main role of leader-member exchange (LMX) in driving team success within multicultural environments.

CHAPTER VI

DISCUSSION AND CONCLUSION

As globalization continues to accelerate, the workforce is becoming increasingly diverse, making the ability to manage multicultural teams more critical than ever. With a growing number of migrant workers contributing significantly to the global labor force, organizations are recognizing the value of diverse cultural perspectives in driving innovation and improving productivity. Leader cultural intelligence (CQ) and its impact on multicultural team performance is a critical topic in today's business world. As organizations expand across borders, they increasingly rely on multicultural teams to bring diverse perspectives and skills. However, managing such teams comes with unique challenges around communication, leadership, and teamwork. was motivated by the need to understand the dynamics of multicultural teams and the role of leaders in managing cultural differences to optimize team performance. By focusing on the relationship between Leader Cultural Intelligence (CQ) and Multicultural Team Performance, this research has studied the challenges that organizations face when managing teams from different cultural backgrounds, including team size and work modality.

Given that effective leadership in culturally diverse teams can foster creativity and problem-solving, this research is particularly timely. Leaders with high CQ are better equipped to manage cultural differences, creating an inclusive environment that enhances collaboration and performance. However, previous studies have shown that multicultural teams often face significant challenges, such as communication barriers and misunderstanding, which can hinder team effectiveness. This study fills the gap in the

literature by examining how Leader Cultural Intelligence (CQ), Leader-Member Exchange (LMX), and Empowering Leadership interact to influence team outcomes, ultimately providing insights for organizations to cultivate leaders capable of leveraging cultural diversity for improved performance.

This research has important implications for businesses looking to improve multicultural team effectiveness by focusing on leadership behaviors that build strong trusting relationships within teams. The findings show that leader cultural intelligence (CQ) has a positive impact on leader-member exchange (LMX) which in turn significantly affects multicultural team performance. The practical applications of this study contribute to the development of leadership strategies that will help organizations better manage multicultural teams, ensuring greater efficiency and success in this diverse global marketplace.

6.1. Results

The results of this research provide important insights into how leader cultural intelligence (CQ) influences multicultural team performance and offers important implications for business practices, leadership development, and team management. The study reveals that leader cultural intelligence is critical to improving leader-member exchange (LMX), with leaders who possess higher levels of cultural intelligence being more adept at building strong, trusting relationships with their team members. This is particularly relevant for organizations operating in diverse environments where managing cultural differences can present challenges. For businesses, this finding highlights the

importance of investing in leadership development programs that focus on enhancing cultural intelligence. When leaders are equipped with cultural awareness and the ability to adapt their leadership style to meet the needs of a diverse workforce, they can foster better communication, collaboration, and a sense of inclusion among team members. This, in turn, can lead to higher levels of team cohesion, trust, and overall effectiveness, which are crucial for navigating the complexities of multicultural teams.

However, the study also found that leader cultural intelligence (CQ) had no direct significant effect on multicultural team performance. The results suggest that having a leader with high cultural intelligence alone does not guarantee improved team performance. Rather, the critical factor driving team performance is the quality of leader-member exchange (LMX). LMX refers to the quality of the relationship between the leader and team members, and it is fundamental in shaping team outcomes. Teams that benefit from high-quality LMX relationships — marked by mutual respect, trust, and open communication— are more likely to perform well. This is particularly critical in multicultural teams, where differences in communication styles, work approaches, and cultural norms can create friction. High-quality leader-member exchange (LMX) ensures that these differences are managed effectively, enabling teams to work together cohesively and achieve high levels of performance. For organizations, this means that leadership development should focus not only on enhancing leaders' cultural intelligence but also on fostering positive leader-member relationships. Leaders who invest time in developing strong, trusting relationships with their team members — regardless of cultural background — are more likely to improve team performance.

In terms of the moderating role of empowering leadership, the study found no significant interaction between empowering leadership and the relationship between leader CQ and team performance. This challenges the prevailing assumption that empowering leadership, which is typically associated with promoting autonomy and providing support for team members, would amplify the effects of leader CQ on team outcomes. While empowering leadership is a valuable leadership style, particularly in fostering employee engagement and motivation, the findings suggest that in the context of multicultural teams, leader CQ and LMX quality alone are sufficient to drive positive team performance. This has important implications for businesses, as it suggests that while empowering leadership may be beneficial, the combination of a leader's cultural intelligence and the quality of relationships they build with their team members are more important factors for improving team performance in diverse environments. Therefore, organizations may need to reassess the emphasis placed on empowering leadership in multicultural teams and consider the foundational role of leader-member relationships and cultural competence.

These findings provide clear guidance for organizations seeking to optimize the performance of their multicultural teams. Businesses should focus on cultivating leaders who possess high cultural intelligence, enabling them to navigate and manage cultural differences effectively. However, they should also prioritize developing leadership skills that foster strong, trust-based relationships with team members. This includes offering leadership training that emphasizes communication, active listening, feedback, and conflict resolution, which are all critical components of high-quality leader-member exchange (LMX). In practice, this means that leadership development programs should

aim to equip leaders with the necessary skills to manage cultural diversity, build connections with team members, and create inclusive environments that enrich team collaboration.

Ultimately, this research highlights the complex dynamics that shape team performance in multicultural environments. By focusing on developing leaders with high cultural intelligence and strong leader-member relationships, organizations can harness the full potential of their multicultural teams, improving collaboration, communication, and problem-solving. Nowadays, these leadership competencies are essential for businesses to remain competitive and thrive in diverse, cross-cultural work environments.

6.2. Discussion and Applications

The findings of this study offer several practical implications for businesses operating in multicultural contexts. First, companies should prioritize the development of leader cultural intelligence (CQ), as it has a significant influence on the quality of leader-member exchanges (LMX). Culturally intelligent leaders are better equipped to understand and navigate the nuances of diverse team members' cultural backgrounds, providing an environment of trust and collaboration. This, in turn, can lead to higher levels of team performance. In practice, organizations can incorporate training programs and workshops designed to enhance cultural intelligence among leaders, which can be particularly beneficial in multinational corporations or teams with diverse cultural makeup.

Moreover, the results emphasize the role of leader-member exchange (LMX) in driving multicultural team performance. Companies should invest in leadership development initiatives that help leaders build strong, positive relationships with their team members. Strategies such as regular one-on-one meetings, active listening, and providing personalized feedback can strengthen leader-member exchange (LMX) and, consequently, improve team performance.

Although the findings did not support the moderating role of empowering leadership, this does not mean that empowering leadership should be dismissed entirely. Rather, it suggests that its benefits may be more context dependent. For example, in more hierarchical or structured organizations, empowering leadership may not have as much of an impact on team outcomes as it would in more dynamic, less hierarchical environments. Businesses should tailor their leadership development efforts to the specific needs of their teams and organizational cultures.

Lastly, the study highlights the importance of context in leadership dynamics. The multi-group analyses revealed that work modality, team size, and cultural similarity between leaders and team members all influence the effectiveness of leadership behaviors. This suggests that businesses should consider these contextual factors when designing leadership development programs and when selecting leaders for multicultural teams.

6.3. Limitations and Future Directions

Several limitations related to these research findings should be considered when interpreting the results and planning future studies. While the relationships explored provide valuable insights, they are explanatory and require further empirical investigation to establish broader generalizability. First, the data for this study were collected between November 2024 and January 2025. This relatively narrow data collection window may not account for temporal shifts in organizational dynamics, leadership expectations, or team compositions. Given the rapidly changing landscape of global workforces and leadership practices, it is essential for future research to replicate these findings across different time periods to evaluate their stability and relevance over time.

In addition to temporal factors, the study's geographic limitation is a noteworthy constraint. All participants were based in the United States, a context with specific cultural, regulatory, and organizational norms. As a result, the applicability of the findings to other cultural settings is limited. Leadership behaviors and team interactions can vary significantly across countries due to differences in communication patterns, power distance, individualism-collectivism, and other cultural dimensions. To strengthen external validity, future studies should aim to include more culturally diverse samples and conduct cross-national comparisons to determine whether the relationships between cultural intelligence (CQ), leader-member exchange (LMX), and team performance hold in varied contexts.

A further limitation is the reliance on self-reported data, which may introduce response biases such as social desirability or common method variance. Participants may

have overestimated their cultural competence or team performance due to a desire to present themselves or their teams positively. Additionally, while the sample of 236 participants provides a solid foundation for statistical analysis, it may have been insufficient to detect more nuanced effects — such as the direct impact of leader CQ on team performance (H1) — especially given the complexity of interactions in multicultural settings. The lack of significance in this pathway might reflect the modest sample size rather than the absence of a true effect. Larger and more heterogeneous samples could help clarify whether stronger patterns emerge under different statistical power conditions.

One particularly meaningful insight from the findings is that leader-member exchange (LMX) — as a behavioral enactment of leadership —may be a more immediate driver of team performance than leader cultural intelligence (CQ) alone. While CQ equips leaders with the awareness and skills necessary to navigate cultural complexity, it is through their actual relationship-building behaviors (captured by LMX) that these competencies are operationalized. This distinction suggests that cultural intelligence may not directly translate into performance gains unless it is expressed through high-quality interpersonal exchanges. Future research should further investigate the pathways by which CQ translates into effective leadership behaviors and the extent to which behavior enactment serves as a critical mechanism.

The regulatory environment and evolving priorities surrounding diversity, equity, and inclusion (DEI) in the workplace may also influence how these findings are interpreted. Organizations are increasingly being held accountable for implementing

inclusive leadership practices and fostering equitable team environments. However, DEI-related initiatives — and the expectations surrounding them — are shifting in response to political, social, and legal developments. For example, recent policy debates and court rulings in the U.S. and other countries may impact how organizations implement or prioritize DEI strategies. These external changes could affect leader behavior and employee perceptions of inclusivity, making it important for future research to examine how shifts in DEI regulations influence the effectiveness of leader CQ and LMX in practice.

Several promising avenues for further investigation have emerged. One is to examine how leader cultural intelligence interacts with other leadership styles beyond empowering leadership. For example, transformational, servant, or inclusive leadership styles may also play significant roles in shaping multicultural team outcomes. Additionally, future studies could explore alternative mediating and moderating variables in the CQ-performance relationship, such as psychological safety, team cohesion, or communication effectiveness. These elements may reveal more nuanced mechanisms by which cultural intelligence fosters or constrains team effectiveness.

Finally, the role of cultural similarity between leaders and team members remains an underexplored factor in cross-cultural leadership. The present study raises the possibility that cultural alignment or distance could influence how leadership behaviors are perceived and enacted, particularly in diverse teams. Future studies could explore how cultural similarity affects the relationship between leader CQ and LMX in more

detail, potentially offering strategic insights for team composition and leader assignment in global organizations.

6.4. Conclusion

This study has provided important insights into the relationship between leader cultural intelligence (CQ), leader-member exchange (LMX), and multicultural team performance. The findings suggest that while leader cultural intelligence (CQ) alone does not directly influence team performance, it strengthens the quality of leader-member relationships, which drives greater team outcomes. This understanding is key for companies seeking to optimize the performance of their multicultural teams, as promoting high-quality relationships between leaders and members is central to achieving success in diverse team environments.

In conclusion, businesses should develop leaders with high cultural intelligence and strong interpersonal skills to enhance team cohesion and performance in multicultural settings. This research provides a foundation for future studies that can further explore the complexities of multicultural team dynamics and leadership effectiveness, ultimately helping organizations navigate the challenges of managing diverse teams in a globalized world.

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APPENDICES

APPENDIX I

Cultural Intelligence Scale - CQS (Ang et al., 2007)

Subscale	Questionnaire Items
Metacognitive CQ	I am conscious of the cultural knowledge I use when interacting with people from different cultural backgrounds.
	I adjust my cultural knowledge as I interact with people from a culture that is unfamiliar to me.
	I am conscious of the cultural knowledge I apply to cross-cultural interactions.
	I check the accuracy of my cultural knowledge as I interact with people from different cultures.
Cognitive CQ	I know the legal and economic systems of other cultures.
	I know the rules (e.g.,, vocabulary, grammar) of other languages.
	I know the cultural values and religious beliefs of other cultures.

	I know the marriage systems of other cultures.
	I know the arts and crafts of other cultures.
	I know the rules for expressing non-verbal behaviors in other cultures.
Motivational CQ	I enjoy interacting with people from different cultures.
	I am confident that I can socialize with locals in a culture that is unfamiliar to me.
	I am sure I can deal with the stresses of adjusting to a culture that is new to me.
	I enjoy living in cultures that are unfamiliar to me.
	I am confident that I can get accustomed to the shopping conditions in a different culture.
Behavioral CQ	I change my verbal behavior (e.g., accent, tone) when a cross-cultural interaction requires it.
	I use pause and silence differently to suit different cross-cultural situations.
	I vary the rate of my speaking when a cross-cultural situation requires it.
	I change my non-verbal behavior when a cross-cultural interaction requires it.
	I alter my facial expressions when a cross-cultural interaction requires it.

APPENDIX II

Leader-Member Exchange – LMX-7 (Graen and Uhl-Bien, 1995)

	Questionnaire Items
LMX-7	Do you know where you stand with your leader (do you usually know how satisfied your leader is with what you do)?
	How well does your leader understand your job problems and needs?
	How well does your leader recognize your potential?

	Regardless of how much formal authority he/she has built into his/her position, what are the chances that your leader would use his/her power to help you solve problems in your work?
	Again, regardless of the amount of formal authority your leader has, what are the chances that he/she would "bail you out" at his/her expense?
	I have enough confidence in my leader that I would defend and justify his/her decision if he/she were not present to do so.
	How would you characterize your working relationship with your leader?

APPENDIX III

Empowering Leadership Questionnaire – ELQ (Arnold et al., 2000)

Subscale	**Questionnaire Items**
Leading By Example	Sets high standards for performance by his/her own behavior.
	Works as hard as he/she can.
	Works as hard as anyone in my work group.
	Sets a good example by the way he/she behaves.
	Leads by example.
Participative Decision Making	Encourages work group members to express ideas/suggestions.
	Listens to my work group's ideas and suggestions.
	Uses my work group's suggestions to make decisions that affect us.
	Gives all work group members a chance to voice their opinions.
	Considers my work group's ideas when he/she disagrees with them.
	Makes decisions that are based only on his/her own ideas.
Coaching	Helps my work group see areas in which we need more training.
	Suggests ways to improve my work group's performance.
	Encourages work group members to solve problems together.

	Encourages work group members to exchange information with one another.
	Provides help to work group members.
	Teaches work group members how to solve problems on their own.
	Pays attention to my work group's efforts.
	Tells my work group when we perform well.
	Supports my work group's efforts.
	Helps my work group focus on our goals.
	Helps develop good relations among work group members.
Informing	Explains company decisions.
	Explains company goals.
	Explains how my work group fits into the company.
	Explains the purpose of the company's policies to my work group.
	Explains rules and expectations to my work group.
	Explains his/her decisions and actions to my work group.
Showing Concern/ Interacting with the Team	Cares about work group members' personal problems.
	Shows concern for work group members' well-being.
	Treats work group members as equals.
	Takes the time to discuss work group members' concerns patiently.
	Shows concern for work group members' success.
	Stays in touch with my work group.
	Gets along with my work group members.
	Gives work group members honest and fair answers.
	Knows what work is being done in my work group.
	Finds time to chat with work group members.

APPENDIX IV

Team Performance Scale (Heilman et al.,1992 and Kirkman and Rosen, 1999)

	Questionnaire Items

Team Performance	My work team is very competent.
	My team gets the work done very effectively.
	My work team has performed the job well.
	My team helps to achieve the organization's mission.
	The quality of work provided by my team is improving over time.
	Critical quality errors occur frequently in my team.
	Others in the company who interact with my team often complain about how my team functions.

APPENDIX V

Quantitative Pilot Survey – Total of 52 Items

Subscale	Codes	Questionnaire Items
Demographics and Controls	Gender	What is your gender? (Male/ Female/ Prefer not to answer)
	Country of Origin	What is your country of origin? (USA/ Other)
	Country of Origin 2	If other, what?
	Country of Residence	What is your country of residence? (USA/ Other)
	Country of Residence 2	If other, what?
	Work Modality	What is the primary modality of your work? (Remote/ Hybrid/ In-person)
	Team Size	What is your work team size? Please consider your work team as your colleagues who work under the same supervisor as you. (2 to 5/ 5 to 15/ More than 15 members)

	LMX Tenure	How long have you worked with your current supervisor? (1 year or less/ 2 to 5 years/ More than 5 years)
	Cultural Diversity	Is your work team culturally diverse? Please consider the members from different nationalities (Yes/ No)
	Cultural Diversity 2	How many countries are represented in your work team? (scale from 2 to 30)
	Cultural Diversity 3	Is your supervisor from the same country of origin as you are? (Yes/ No)
Leader Cultural Intelligence (CQ)	MC1	My supervisor is conscious of the cultural knowledge he/she uses when interacting with people from different cultural backgrounds.
	MC2	My supervisor adjusts his/her cultural knowledge as he/she interacts with people from a culture that is unfamiliar to him/her.
	MC3	My supervisor is conscious of the cultural knowledge he/she applies to cross-cultural interactions.
	MC4	My supervisor checks the accuracy of his/her cultural knowledge as he/she interacts with people from different cultures.
	COG1	My supervisor knows the legal and economic systems of other cultures.
	COG2	My supervisor knows the rules (e.g.,, vocabulary, grammar) of other languages.
	COG3	My supervisor knows the cultural values and religious beliefs of other cultures.
	COG4	My supervisor knows the rules for expressing non-verbal behaviors in other cultures.
	MOT1	My supervisor enjoys interacting with people from different cultures.
	MOT2	My supervisor is confident that he/she can socialize with locals in a culture that is unfamiliar.
	MOT3	My supervisor is sure he/she can deal with the stresses of adjusting to a new culture.

	MOT4	My supervisor enjoys living in cultures that are unfamiliar to him/her.
	BEH1	My supervisor changes his/her verbal behavior (e.g. , accent, tone) when a cross-cultural interaction requires it.
	BEH2	My supervisor uses pause and silence differently to suit different cross-cultural situations.
	BEH3	My supervisor varies the rate of his/her speaking when a cross-cultural situation requires it.
	BEH4	My supervisor changes his/her non-verbal behavior when a cross-cultural interaction requires it.
	BEH5	My supervisor alters his/her facial expressions when a cross-cultural interaction requires it.
Leader-Member Exchange (LMX)	LMX1	I would characterize the working relationship I have with my supervisor as extremely effective.
	LMX2	My supervisor recognizes my potential.
	LMX3	I usually know where I stand with my supervisor.
	LMX4	My supervisor understands my job problems and needs.
	LMX5	Regardless of how much formal authority my supervisor has built into his/her position, he/she would use his/her power to help me solve problems in my work.
	LMX6	Regardless of the amount of formal authority my supervisor has, he/she would “bail me out” at his/her expense if I really need it.
	LMX7	I have enough confidence in my supervisor that I would defend and justify his/her decision if he/she were not present to do so.
Empowering Leadership (ELQ)	ELQ1	My supervisor sets high standards for performance by his/her own behavior.
	ELQ2	My supervisor leads by example.
	ELQ3	My supervisor encourages work group members to express ideas and suggestions.
	ELQ4	My supervisor involves my work group in decisions that affect us.
	ELQ5	My supervisor helps my work group see areas in which we need more training.

	ELQ6	My supervisor uses my work group's suggestions to make decisions that affect us.
	ELQ7	My supervisor explains company goals to my work group.
	ELQ8	My supervisor informs me about company changes that will affect me.
	ELQ9	My supervisor shows concern for my work group's well-being.
	ELQ10	My supervisor interacts with my work group in a way that is consistent with the beliefs and values of our
Team Performance	PF1	My work team is very competent.
	PF2	My team gets the work done very effectively.
	PF3	My work team has performed the job well.
	PF4	My team helps to achieve the organization's mission.
	PF5	The quality of work provided by my team is improving over time.
	PF6	Critical quality errors occur frequently in my team.
	PF7	Others in the company who interact with my team often complain about how my team functions.

** This survey had a total of 55 items, considering 3 attention check questions.

APPENDIX VI

Main Study Survey – Total of 49 Items

Subscale	**Codes**	**Questionnaire Items**
Demographics and Controls	Gender	What is your gender? (Male/ Female/ Prefer not to answer)
	Country of Origin	What is your country of origin? (USA/ Other)
	Country of Residenc	What is your country of residence? (USA/ Other)

	e	
	Work Modality	What is the primary modality of your work? (Remote/ Hybrid/ In-person)
	Team Size	What is your work team size? Please consider your work team as your colleagues who work under the same supervisor as you. (2 to 5/ 5 to 15/ More than 15 members)
	LMX Tenure	How long have you worked with your current supervisor? (1 year or less/ 2 to 5 years/ More than 5 years)
	Cultural Diversity	Is your work team culturally diverse? Please consider the members from different nationalities (Yes/ No)
	Cultural Diversity 2	How many countries are represented in your work team? (scale from 2 to 30)
	Cultural Diversity 3	Is your supervisor from the same country of origin as you are? (Yes/ No)
Leader Cultural Intelligence (CQ)	MC1	My supervisor is conscious of the cultural knowledge he/she uses when interacting with people from different cultural backgrounds.
	MC2	My supervisor adjusts his/her cultural knowledge as he/she interacts with people from a culture that is unfamiliar to him/her.
	MC3	My supervisor is conscious of the cultural knowledge he/she applies to cross-cultural interactions.
	MC4	My supervisor checks the accuracy of his/her cultural knowledge as he/she interacts with people from different cultures.
	COG1	My supervisor knows the legal and economic systems of other cultures.
	COG2	My supervisor knows the rules (e.g.,, vocabulary, grammar) of other languages.
	COG3	My supervisor knows the cultural values and religious beliefs of other cultures.
	COG4	My supervisor knows the rules for expressing non-verbal behaviors in other cultures.
	MOT1	My supervisor enjoys interacting with people from different cultures.

	MOT2	My supervisor is confident that he/she can socialize with locals in a culture that is unfamiliar.
	MOT3	My supervisor is sure he/she can deal with the stresses of adjusting to a new culture.
	BEH1	My supervisor changes his/her verbal behavior (e.g. , accent, tone) when a cross-cultural interaction requires it.
	BEH2	My supervisor uses pause and silence differently to suit different cross-cultural situations.
	BEH3	My supervisor varies the rate of his/her speaking when a cross-cultural situation requires it.
	BEH4	My supervisor changes his/her non-verbal behavior when a cross-cultural interaction requires it.
	BEH5	My supervisor alters his/her facial expressions when a cross-cultural interaction requires it.
Leader-Member Exchange (LMX)	LMX1	I would characterize the working relationship I have with my supervisor as extremely effective.
	LMX2	My supervisor recognizes my potential.
	LMX3	I usually know where I stand with my supervisor.
	LMX4	My supervisor understands my job problems and needs.
	LMX5	Regardless of how much formal authority my supervisor has built into his/her position, he/she would use his/her power to help me solve problems in my work.
	LMX6	Regardless of the amount of formal authority my supervisor has, he/she would “bail me out” at his/her expense if I really need it.
	LMX7	I have enough confidence in my supervisor that I would defend and justify his/her decision if he/she were not present to do so.
Empowering Leadership (ELQ)	ELQ1	My supervisor explains company decisions to my work group.
	ELQ2	My supervisor explains company goals to my work group.
	ELQ3	My supervisor explains how my work group fits into the company.

	ELQ4	My supervisor explains rules and expectations to my work group.
	ELQ5	My supervisor encourages work group members to express ideas and suggestions.
	ELQ6	My supervisor uses my work group's suggestions to make decisions that affect us.
Team Performance	PF1	My work team is very competent.
	PF2	My team gets the work done very effectively.
	PF3	My work team has performed the job well.
	PF4	My team helps to achieve the organization’s mission.
	PF5	The quality of work provided by my team is improving over time.
	PF6	Critical quality errors occur frequently in my team.
	PF7	Others in the company who interact with my team often complain about how my team functions.
Leader Emotional Intelligence (EQ)	EQ1	My supervisor recognizes how emotions impact our work performance.
	EQ2	My supervisor maintains control of emotions, even in stressful situations.
	EQ3	My supervisor understands and empathizes with others' perspectives and emotions.
	EQ4	My supervisor inspires and motivates others toward a shared vision or goal.

** This survey had a total of 52 items, considering 3 attention check questions.

VITA

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