

CHAPTER I

INTRODUCTION

1.1 Background of the Study

Globalization has profoundly altered multinational corporations (MNCs) operations, requiring them to navigate increasingly intricate and culturally diverse environments. Consequently, Cultural Intelligence (CQ) has become an essential skill for managing cross-cultural interactions and boosting organizational efficiency. CQ is defined as an individual's capacity to perform effectively in culturally diverse settings, incorporating cognitive, metacognitive, and motivational aspects that aid in adaptability and intercultural competence Earley & Ang, (2003). In today's organizations, especially those with international operations, CQ is crucial for promoting collaboration, minimizing misunderstandings, and enhancing overall employee performance.

In countries with developing economies, such as Sierra Leone, multinational companies face additional sociocultural hurdles, such as language differences, divergent work values, low levels of institutional trust, and different cultural norms. If not managed well, these challenges can adversely affect employees' engagement and productivity levels. Although cultural diversity can foster innovation, creativity, and effective problem-solving, poor management of cultural differences may result in conflicts, weakened team cohesion, and inefficiencies in organizational operations (Presbitero, 2017; Van Dyne et al., 2012).

In Sierra Leone, Cultural Intelligence is important because multinational corporations operate within post-conflict recovery, institutional fragility, limited infrastructure, and culturally diverse workforces. The concrete problem in this study is low or inefficient employee productivity, not cultural diversity itself. In multicultural banking workplaces, language differences, communication styles, work values, hierarchy, and trust gaps may weaken coordination, delay task completion, reduce teamwork, and affect service quality and timeliness. Prior research shows that Cultural Intelligence predicts cultural judgment, adaptation, and task performance, while employee engagement contributes to employee productivity (Hanaysha, 2016b).

Although MNCs in Sierra Leone operate in mining, agriculture, telecommunications, energy, infrastructure, and financial services, this study focuses on multinational financial institutions because banking is formal, regulated, service-intensive, and more comparable across organizations. Sierra Leone's banking sector consists of fourteen commercial banks, including local and internationally affiliated institutions (International Trade Administration, 2026; World Bank, 2023). Unlike mining or agriculture, where productivity is strongly affected by machinery, land access, and commodity prices, banking productivity depends heavily on communication accuracy, customer service, compliance discipline, knowledge sharing, and teamwork. Therefore, limiting the study to banks improves methodological focus and clarifies the relationship between Cultural Intelligence, engagement, and productivity (Jyoti & Kour, 2017).

Cultural Intelligence provides a strategic method for organizations to address these challenges. Individuals with high CQ, whether employees or managers, are better equipped to interpret unfamiliar cultural cues, adjust their behavior, and engage effectively with colleagues from diverse backgrounds. This skill improves knowledge sharing, decision-making, and organizational adaptability, ultimately resulting in enhanced performance (Ang et. al., 2007). However, despite its growing importance, many organizations in Sierra Leone lack structured frameworks for developing CQ, such as formal training programs and culturally responsive human resource practices. This shortfall has caused inconsistencies in employee engagement and productivity in multinational work environments.

While the existing body of research has thoroughly explored Cultural Intelligence as a broad concept, there is still a scarcity of empirical data on how its specific components (metacognitive, cognitive, and motivational CQ) uniquely impact employee outcomes. Specifically, the degree to which these components influence employee engagement and productivity in developing countries has not been extensively studied. Although employee engagement is recognized as a crucial factor in enhancing performance, its function as a mediator between CQ and productivity has not been adequately examined.

This study aims to fill the existing gaps by exploring both the direct and indirect connections between the dimensions of CQ, employee engagement, and productivity in multinational companies based in Sierra Leone. From a Knowledge Management standpoint, Cultural Intelligence is viewed as an

intangible asset that boosts employees' capacity to exchange knowledge, adapt to various cultural settings, and enhance performance results. This viewpoint highlights the strategic importance of Cultural Intelligence in helping organizations utilize cultural diversity as a competitive edge.

1.2 Research Authenticity

This study's authenticity stems from its emphasis on Cultural Intelligence (CQ) as a type of knowledge capital and its particular effect on worker productivity in multinational corporations (MNCs) doing business in Sierra Leone, an area that has not received enough attention in the academic literature. Although prior research has examined the connection between CQ and organizational outcomes in various international settings, most of these studies have focused on developed or upper-middle-income nations and have rarely considered the sociocultural circumstances unique to post-conflict low-income countries such as Sierra Leone.

Several recent studies have provided crucial foundations. For instance, Chatterjee et al. (2023) examined how CQ as intellectual capital affects coordination and information sharing in digital platform-based MNEs; however, their study was limited to large, tech-focused global firms and did not include comparisons based on regional contexts. Similarly, Tavoletti et al. (2024) did not address organizational productivity in actual in-country multinational operations; instead, they concentrated on the effect of CQ on team performance in global virtual teams.

Furthermore, Tesfaye et al. (2025) investigated CQ among Ethiopian teacher candidates, focusing on educational settings as opposed to business performance.

The comparative, in-country case study methodology of this research, which uses quantitative data from MNCs in Sierra Leone, particularly in the financial sector, sets it apart. This thesis makes the following contributions:

- Applying the knowledge management theoretical framework to treat CQ as knowledge capital.
- Empirically linking CQ levels to quantifiable productivity metrics, including initiative, teamwork, time management, and goal achievement;
- Closing the reality gap: Cultural intelligence is not routinely applied or quantified in poor nations, despite being presumed to exist or have an impact on global teams.
- Concentrating on post-conflict and culturally diverse settings, which introduce complexity that is neglected in research from nations that are more stable or homogeneous.
- Delivering organizational and HR strategic insights that are immediately useful to multinational corporations in West Africa and other developing nations.

Although CQ has been examined from a strategic and HR management perspective by Livermore et al. (2022) and Jalloah (2015), their research is devoid of empirical evidence unique to Sierra Leone or other low-income post-conflict settings. Additionally, these studies usually employ conceptual or Western-

oriented models, but this study takes into account regional cultural quirks and compares the performance outcomes of those with high and low CQ using a comparative framework.

Thus, based on the theoretical underpinnings of knowledge management and cultural capital, this study bridges a substantial scholarly gap by relating CQ to employee productivity in the distinct and underrepresented environment of Sierra Leone. The combination of theory and practical experience in a comparative, quantifiable, and policy-relevant manner gives it uniqueness and offers MNCs fresh insights and useful tactics for overcoming ethnic obstacles in emerging countries.

1.3 Research problems

Managing culturally diverse workforces is becoming increasingly difficult for Multinational Businesses (MNCs), especially in emerging nations like Sierra Leone. There are few comparative studies on how Cultural Intelligence (CQ) affects worker productivity in various cultural and economic situations, even though CQ is known to be important for improving communication and teamwork. This study aims to address this gap by examining the connection between CQ and worker productivity in multinational corporations with operations in Sierra Leone. Understanding this link is crucial for developing successful human resource strategies that facilitate cross-cultural integration and enhance performance in various corporate contexts.

For multinational companies (MNCs) doing business in Sierra Leone, the use of Cultural Intelligence (CQ) to increase staff productivity poses several

significant problems. The lack of knowledge and comprehension of CQ among local and foreign employees is a major challenge. The absence of organized training programs in many Sierra Leonean organizations leads to low involvement, interpersonal conflict, and frequent misunderstandings, particularly in multicultural teams. Cultural hurdles that make it more difficult to implement culturally responsive management techniques include linguistic diversity, post-conflict social dynamics, and employees' differing degrees of formal education. These elements make it more difficult to apply CQ effectively, which eventually affects team cohesiveness and productivity in multinational corporations (MNCs).

In Sierra Leone, the lack of key performance indicators (KPIs) linking cultural intelligence (CQ) to employee productivity presents a significant challenge for multinational corporations (MNCs). Many of these companies rely on standard Key Performance Indicators (KPIs) that do not account for cross-cultural competencies in their employee assessments. Moreover, data on workers' productivity are often fragmented, inconsistent, or confidential, making it more difficult to draw clear conclusions. Reduced productivity is also a result of inadequate infrastructure, restricted training opportunities, and frequent cultural miscommunication between local employees and foreign supervisors. These factors make it difficult for organizations to quantify the impact of CQ on teamwork, productivity, and overall performance, which hinders the application of evidence-based CQ practices.

Table 1. Research Originality

N o	Author	Variables			Context	
		Independent	Mediating	Moderating		Dependent
1	Chatterjee,Chaudhuri,Mariani, Wamba (2023)	<ul style="list-style-type: none"> • Human Capital (HUC) • Structural Capital (STC) 	<ul style="list-style-type: none"> • Knowledge Sharing • Knowledge Seeking • Coordination • Cooperation 		<ul style="list-style-type: none"> • Firm Performance 	<ul style="list-style-type: none"> • Digital platform-based Multinational Enterprises
2	Tavoletti et,al (2024)	<ul style="list-style-type: none"> • Team IQ (Cognitive Ability) • Team CQ • Academic Pedigree Average • Academic Pedigree Diversity • Academic Pedigree Elevation 		<ul style="list-style-type: none"> • Interaction/configuration effects 	<ul style="list-style-type: none"> • Team Performance 	<ul style="list-style-type: none"> • Education
3	Massa and Testa (2009)	<ul style="list-style-type: none"> • Knowledge Domain • Innovation Behavior 	<ul style="list-style-type: none"> • Knowledge Management System 		<ul style="list-style-type: none"> • Organizational Competitive Advantage 	<ul style="list-style-type: none"> • Italian small and medium-sized food producers
4	Ang et,al (2024)	<ul style="list-style-type: none"> • Personality Traits 	<ul style="list-style-type: none"> • Cultural Intelligence (CQ) 	<ul style="list-style-type: none"> • International Experience 	<ul style="list-style-type: none"> • Intercultural Effectiveness 	<ul style="list-style-type: none"> • International professionals and students
5	Webb et,al (2024)	<ul style="list-style-type: none"> • Cultural intelligence • Four Dimentions: <ol style="list-style-type: none"> I. CQ Driv II. CQ Knowledge 	<ul style="list-style-type: none"> • Inclusive Health Assessment Practices 	<ul style="list-style-type: none"> • Individual Bias Awareness and Reflection 	<ul style="list-style-type: none"> • Equitable Pain Management Outcomes 	<ul style="list-style-type: none"> • Healthcare / Nursing Practice Context

No	Author	Variables				Context
		Independent	Mediating	Moderating	Dependent	
		III. CQ Strategy IV. CQ Action				
6	Tesfaye et al. (2025)	<ul style="list-style-type: none"> • Cultural Intelligence (CQ) and its four dimensions: <ul style="list-style-type: none"> • Metacognitive CQ • Cognitive CQ • Motivational CQ • Behavioral CQ 		<ul style="list-style-type: none"> • Demographic Variables 	<ul style="list-style-type: none"> • Academic Self-Efficacy 	<ul style="list-style-type: none"> • Education
7	Jalloh (2015)	<ul style="list-style-type: none"> • International Human Resource Management (IHRM) Practices - Cultural Diversity Factors 	<ul style="list-style-type: none"> • Expatriate Adjustment and Performance 	<ul style="list-style-type: none"> • Cultural Differences / Host Country Context 	<ul style="list-style-type: none"> • Effectiveness of Expatriate Management 	<ul style="list-style-type: none"> • Multinational Companies
8	Livermore et al. (2022)	<ul style="list-style-type: none"> • Organizational Cultural Intelligence (Organizational CQ) comprising four interacting dimensions: <ul style="list-style-type: none"> • CQ Drive (Motivation and Inclusion Orientation) • CQ Knowledge (Understanding Cultural Norms and Assumptions) • CQ Strategy (Inclusive, Adaptive 	<ul style="list-style-type: none"> • Organizational Routines and Culture 	<ul style="list-style-type: none"> • VUCA Context (Volatility, Uncertainty, Complexity, Ambiguity) 	<ul style="list-style-type: none"> • Organizational Effectiveness and Adaptability 	<ul style="list-style-type: none"> • Modern organizations (Spotify, IKEA, Pixar, Disney, Amazon, and Whole Foods).

No	Author	Variables				Context
		Independent	Mediating	Moderating	Dependent	
		Organizational Routines) • CQ Action (Agile, Culturally Responsive Practices)				
9	Jaziri (2019)	<ul style="list-style-type: none"> • Customer Service Experience (Offline and Online)Customer Lived Experience Dimensions: <ul style="list-style-type: none"> • Physical (Sensory) • Praxeological (Behavioral/Action-based) • Rhetorical (Meaning/Interpretive) 	<ul style="list-style-type: none"> • Customer Experiential Knowledge (CEK) 	<ul style="list-style-type: none"> • Digital Environment / Web 2.0 Context 	<ul style="list-style-type: none"> • Experience-Based Innovation and Competitive Advantage 	<ul style="list-style-type: none"> • Digital service industry
10	Kamara (2025)	<ul style="list-style-type: none"> • Metacognitive cultural intelligence • Cognitive cultural intelligence • Motivational cultural intelligence 	<ul style="list-style-type: none"> • Employee Engagement 		<ul style="list-style-type: none"> • Employee productivity 	<ul style="list-style-type: none"> • Multinational companies

Although Cultural Intelligence (CQ) is becoming more widely recognized as a productivity enhancer in international business, little is known about how it affects worker performance in developing countries like Sierra Leone. In these settings, where cultural complexity, infrastructure constraints, and uneven training systems are prevalent, existing frameworks may not effectively address the reality gap. Through the theoretical framework of knowledge capital, this study investigates the relationship between employee productivity and CQ in multinational corporations (MNCs) in Sierra Leone. The goal of this study is to offer practical recommendations for enhancing organizational performance and cross-cultural cooperation.

The studies summarized in Table 1.1 show that previous research has examined Cultural Intelligence across diverse contexts, including digital multinational enterprises, global virtual teams, education, healthcare, expatriate management, customer experience, and knowledge management. However, most of these studies were conducted in developed, Western-oriented, or non-financial organizational settings, while limited empirical evidence exists on how specific dimensions of Cultural Intelligence influence employee engagement and productivity in multinational financial institutions operating in post-conflict developing economies such as Sierra Leone. Therefore, this study extends the existing literature by examining the direct effects of metacognitive, cognitive, and motivational Cultural Intelligence on employee engagement and employee productivity, while also testing employee engagement as a mediating mechanism in the relationship between Cultural Intelligence and productivity.

1.4 Research Questions

- a. Does metacognitive cultural intelligence significantly affect employee engagement in MNC in Sierra Leone?
- b. Does cognitive cultural intelligence significantly affect employee engagement in MNC in Sierra Leone?
- c. Does motivational cultural intelligence significantly affect employee engagement in MNC in Sierra Leone?
- d. Does metacognitive cultural intelligence significantly affect employee productivity in MNC in Sierra Leone?
- e. Does cognitive cultural intelligence significantly affect employee productivity in MNC in Sierra Leone?
- f. Does motivational cultural intelligence significantly affect employee productivity in MNC in Sierra Leone?
- g. Does employee engagement significantly affect employee productivity in MNC in Sierra Leone?
- h. Does employee engagement serve as a mediating variable in the relationship between metacognitive cultural intelligence and employee productivity?
- i. Does employee engagement serve as a mediating variable in the relationship between cognitive cultural intelligence dimensions and employee productivity?

- j. Does employee engagement serve as a mediating variable in the relationship between the motivational cultural intelligence dimensions and employee productivity?

1.5 Research objectives

- a. To evaluate the cultural intelligence of workers in MNCs in Sierra Leone.
- b. To determine whether cultural intelligence has a significant effect on employee engagement within multinational corporations in Sierra Leone.
- c. To investigate the connection between worker productivity and cultural intelligence in Sierra Leone.
- d. To examine whether employee engagement mediates the relationship between cultural intelligence dimensions and employee productivity.
- e. To offer MNCs strategic suggestions for enhancing productivity through cultural intelligence programs.

1.6 Significance of the research

This study contributes significantly to the literature by closing a crucial knowledge gap regarding the impact of cultural intelligence on employee productivity in multinational firms operating in developing nations such as Sierra Leone. This study adds significant knowledge to organizational theory by investigating this relationship, especially in situations where cultural diversity presents particular management difficulties that affect participation and performance.

In the real world, the results will assist legislators, HR specialists, and company executives in creating practical plans to improve productivity and cross-

cultural cooperation in the workplace. The insights can be used by multinational corporations to create targeted training programs, enhance the integration of heterogeneous teams, and use cultural intelligence as a strategic tool to gain a competitive edge and sustain growth.

1.6.1 Theoretical benefits

Theoretically, this study contributes to the understanding of Cultural Intelligence (CQ) as a strategic form of knowledge capital in the context of knowledge management. In this study, CQ is examined through three dimensions, namely metacognitive, cognitive, and motivational CQ, which are expected to influence employee engagement and employee productivity in multicultural work environments. By linking these CQ dimensions to organizational productivity outcomes, this study advances existing theoretical models and provides a contextual perspective on the role of human capital in developing economies.

Furthermore, by utilizing Afsar et al. (2020), Cultural Dimensions and Social Exchange Theory to connect CQ with important dimensions like trust, innovation, collaboration, and employee well-being, this study enhances the theoretical discourse. This supports the notion that culturally intelligent actions improve team cohesion, flexibility, and knowledge sharing, which in turn mediate organizational performance. By contextualizing CQ in post-conflict, highly diverse situations like Sierra Leone, the research not only challenges pre-existing frameworks but also advances theory. This opens the door for future cross-national theoretical advancements in organizational behavior and human resource

studies by providing academics with a more sophisticated understanding of the ways in which cultural factors interact with management practices.

1.6.2 Practical benefits

For multinational corporations (MNCs), this study has useful implications for strategic decision-making and business strategy formulation. It provides evidence-based perspectives on how cultural intelligence (CQ) enhances communication, teamwork, and employee productivity in various work environments. Organizations can use these insights to build inclusive workplaces, enhance employee onboarding procedures, and establish functional cultural training programs. Therefore, through improved cross-cultural knowledge, multinational corporations (MNCs) operating in culturally difficult locations, such as Sierra Leone, can improve operational performance, decrease conflicts, and increase worker engagement.

This study offers useful tools for HR professionals and company executives to enhance team integration, employee appraisal and retention. Organizations can implement focused interventions, such as leadership coaching, culturally sensitive performance measurements, and conflict resolution techniques, by understanding how CQ affects workplace outcomes. Multinational business consultants and policymakers may also use this research to create labor frameworks that support local cultural dynamics. This research facilitates cross-cultural communication, promoting seamless international operations and long-term corporate viability in developing nations.

1.7 Literature Review

1.7.1. Productivity

Productivity is generally defined as the measure of how efficiently inputs such as time, labor, and resources, are transformed into outputs, typically in the form of goods or services (Beheshti & Beheshti, 2010). It plays a crucial role in economic development and organizational success because improved productivity allows for increased output with the same or fewer inputs. Boosting productivity often requires optimizing processes, integrating new technologies, enhancing workforce skills, and implementing effective management practices. According to Mohlala et al. (2024) assessing productivity can be challenging due to its inclusion of both quantitative and qualitative aspects, such as innovation, employee engagement, and operational efficiency. Sustained productivity growth is vital for maintaining competitiveness and ensuring long-term sustainability in various industries.

1.7.2 Types of Productivity

1.7.2.1 Employee Productivity

Employee productivity pertains to the evaluation of individual workers' performance within the workplace, specifically assessing the efficiency with which each individual converts inputs, such as time, effort, and skills, into quantifiable outcomes. This form of productivity underscores the importance of personal competencies, motivation, and quality of task execution. Enhancements in employee productivity frequently result from targeted training, improved

working conditions, and the promotion of engagement, all of which contribute to optimizing the efficiency and effectiveness of individual contributions.

1.7.2.2 Organizational Productivity

Organizational productivity encompasses the collective performance of all the employees, processes, and resources within a company. It reflects the extent to which integrated efforts and systems collaborate to produce goods or services, considering factors such as operational efficiency, technological utilization, and management practices. This comprehensive perspective captures the synergy among various organizational components, thereby driving the overall output, competitiveness, and long-term sustainability. Both employee and organizational productivity are essential for a comprehensive understanding of performance across different levels within the economic and business contexts.

1.7.2.3 Total Factor Productivity

Total Factor Productivity (TFP) quantifies how well a business employs a variety of inputs, including labor, capital, and technology, to provide goods and services. Effective management, improved technology, and innovation contribute to increased efficiency. By considering the combined effect of these elements on overall productivity, TFP goes beyond merely examining individual input. This is closely related to the concept of organizational productivity discussed in the chosen text, which stresses the integration of management, technology, processes, employees, and resources to increase output, competitiveness, and sustainability.

1.7.3. Employee Productivity

1.7.3.1 Defining Employee Productivity

In multinational corporations (MNCs), employee productivity refers to the efficiency and effectiveness with which employees from diverse geographic and cultural backgrounds contribute to the attainment of the company's objectives. This concept is shaped by various factors, including cross-cultural management, communication methodologies, technological integration, and organizational support systems. To sustain high productivity levels in MNCs, it is imperative to address challenges associated with cultural diversity, time-zone disparities, and differing labor regulations while simultaneously leveraging global talent and fostering knowledge sharing. Strategies to enhance productivity often involve the creation of inclusive work environments, implementation of standardized yet adaptable performance metrics, and utilization of advanced digital collaboration tools to coordinate efforts across international boundaries. A comprehensive understanding and optimization of employee productivity in MNCs are essential for maintaining competitive advantages and achieving global business objectives (Ekemezie & Digitemie, 2024). This concept underscores the significance of managing the global workforce and enhancing the efficiency of MNCs.

1.7.3.2 Key Dimensions of Employee Productivity

According to Sauermann, (2023), he outlines four dimensions of Employees.

- **Quantity of Work:** The amount of output an employee generates in a specific amount of time is referred to as the quantity of work. It emphasizes the amount of labor completed, projects managed, or goods

supplied, revealing the worker's ability and productivity. A strong drive, concentration, and time management abilities are frequently demonstrated by a greater volume of work. To guarantee consistency in performance, it must be balanced with quality. To determine whether workers reach or surpass anticipated productivity levels and workload targets, organizations commonly use performance metrics, productivity reports, or output ratios to quantify the quantity.

- **Quality of Work:** The precision, comprehensiveness, and general caliber of an employee's production are all measured by the quality of work. It shows how successfully work is done while considering accuracy, originality, and conformity to company policies. Errors, rework, and client satisfaction are all reduced by high-quality work. Workers who deliver high-quality results frequently exhibit professionalism, attention to detail, and role expertise. Quality is important to organizations because it enhances their reputation, operational effectiveness, and long-term success while preventing productivity from being sacrificed for excellence or for corporate goals.
- **Timeliness:** Employee timeliness is the capacity to complete assignments and adhere to deadlines. It places a strong emphasis on setting priorities, managing time well, and being flexible with work schedules and unforeseen requirements. Timely performance facilitates efficient workflows, improved team coordination, and increased organizational efficiency. Discipline, dependability, and dedication are displayed by

workers who regularly submit their assignments on time. Additionally, in competitive business situations, timeliness helps firms avoid operational delays that can lower productivity and profitability, preserve client satisfaction, and accomplish strategic goals.

- **Efficiency and Effectiveness:** Effectiveness and efficiency are two important dimensions of worker productivity. Efficiency is about doing things with the least amount of time, money, and effort possible, whereas effectiveness is about reaching the intended goals or outcomes. Both are balanced by a productive worker who works efficiently without sacrificing results. While effectiveness ensures the successful achievement of corporate goals, efficiency ensures cost reduction and optimizes resources. These metrics are crucial for assessing and raising workplace productivity, as they determine an employee's overall contribution to performance improvement, operational sustainability, and competitive advantage.

In this approach, employee productivity is the dependent variable, and Cultural Intelligence (CQ) is the independent variable in this study. In this study, employee productivity is the dependent variable, while metacognitive CQ, cognitive CQ, and motivational CQ are the independent variables. Employee engagement is positioned as the mediating variable. Drawing on knowledge management and social exchange perspectives, employees with higher CQ are expected to collaborate more effectively, share knowledge, build trust, and demonstrate stronger workplace productivity. Therefore, this study examines the direct effects of CQ dimensions on employee engagement and employee

productivity, as well as the indirect effects of CQ dimensions on employee productivity through employee engagement. This approach provides a theoretical basis for investigating how cultural intelligence enhances both individual and organizational efficacy in global corporate settings.

This systematic literature review aims to critically analyze existing academic and empirical studies on the impact of cultural intelligence (CQ) on employee productivity within multinational corporations (MNCs), with a specific focus on the Sierra Leonean context. Given the increasing globalization of business and the strategic importance of managing culturally diverse workforces, this review synthesizes scholarly perspectives and evidence on how CQ—defined as the capability to function effectively in culturally diverse settings—influences organizational outcomes, such as task performance, innovation, and collaboration. This review aims to map the intellectual landscape of CQ research, identify relevant theoretical models, assess methodological approaches, and evaluate key findings that are applicable to the Sierra Leonean corporate environment.

This review primarily focuses on peer-reviewed journal articles, empirical studies, and conceptual frameworks published between 2003 and 2025 that address CQ in MNCs, especially in developing economies and Africa. It explores dimensions such as cognitive, motivational, and metacognitive CQ, and their influences on employee engagement, communication, and team performance. While the review emphasizes literature relevant to Sierra Leone, it also includes comparative insights from similar emerging markets for contextual understanding. However, it does not cover studies outside the scope of organizational behavior or

those that treat CQ in unrelated domains, such as tourism or education. The ultimate objective is to highlight the research gap in Sierra Leone and support the foundation for original fieldwork addressing how CQ enhances productivity in a multinational workforce.

1.7.3.4 Factors Affecting Employee Productivity

According to Hanaysha, (2016a), employee productivity is shaped by a combination of personal, organizational, and external elements. Important personal factors include employees 'skills, experience, motivation, work ethic, and physical or mental health. Organizational aspects such as leadership style, workplace culture, role clarity, opportunities for training and development, and resource availability significantly influence employee performance. Moreover, aspects such as compensation, recognition, communication quality, and teamwork can greatly enhance or impede the productivity. External factors such as economic conditions, technological advancements, and work-life balance challenges also impact how employees engage with their responsibilities. Overall, productivity increases when employees feel supported, well-equipped, fairly compensated, and motivated in a positive and efficient work environment.

1.7.4 Cultural Intelligence

1.6.4.1 Definition of Cultural Intelligence

Knowledge management provides a theoretical framework by defining cultural intelligence as a vital organizational resource. Knowledge management principles are strongly aligned with cultural intelligence, which is the capacity to learn, communicate, and use culturally relevant information to achieve desired

outcomes. This research can examine the relationship between employee productivity and the efficient management of cultural information through communication, learning, and adaptive behaviors using this method. Additionally, by examining cultural intelligence through the lens of knowledge capital, this study emphasizes it as an intangible asset that improves social and human capital and has strategic value in international scenarios. To assess the organizational impact of cultural intelligence, knowledge management promotes the creation of a knowledge capital viewpoint in addition to guiding theoretical formulation.

Cultural Intelligence (CQ) has emerged as a critical competency in cross-cultural management, particularly within multinational corporations (MNCs) operating in complex and diverse global environments. As organizations increasingly expand across borders, employees' and leaders' abilities to understand, adapt to, and effectively navigate cultural differences become essential for sustaining performance and competitiveness (Singh, 2024). CQ enables individuals to interpret unfamiliar behaviors, communicate across cultural boundaries, and foster inclusive and collaborative work environments. In MNCs with culturally diverse workforces, high levels of CQ are linked to improved employee motivation, reduced misunderstandings, enhanced communication, and greater alignment with organizational goals, all of which contribute directly to productivity, innovation, and overall success.

1.7.4.2 Cultural Intelligence Measurement

1. **Metacognitive CQ:** Metacognitive Cultural Intelligence represents the advanced cognitive processes that people employ to gain and interpret

cultural insights (Ang et al., 2007). It encompasses awareness, planning, overseeing, and modifying mental frameworks during cross-cultural interactions. Those with high metacognitive CQ deliberately challenge their cultural beliefs, adapt their thought processes, and devise strategies for effective communication with individuals from diverse cultural backgrounds. This reflective ability enables them to foresee possible misunderstandings and to adjust their behavior accordingly. In professional environments, metacognitive CQ is crucial for cultivating situational awareness and enhancing strategic thinking in intercultural situations, thereby improving judgment and decision making.

Metacognitive cultural intelligence (CQ) is one of the four dimensions of the Cultural Intelligence Scale (CQS) discussed by Ang et al., (2007). This was measured by using four specific items. These items assess an individual's awareness of and control over their thought processes related to culture.

The four measurement items for Metacognitive CQ (MC) were as follows:

MC1: I am conscious of the cultural knowledge I use when interacting with people from different cultural backgrounds.

MC2: I adjust my cultural knowledge as I interact with people from a culture unfamiliar to me.

MC3: I am conscious of the cultural knowledge that I apply to cross-cultural interactions.

MC4: I check the accuracy of my cultural knowledge as I interact with people from different cultures.

2. Cognitive CQ: According to Ang et al., (2007), cognitive-cultural intelligence is the knowledge and comprehension of cultural norms, practices, and conventions gained through exposure, education, and experience. Knowledge of diverse cultural systems, including social structures, legal and economic frameworks, and values that shape behavior in different civilizations, is included in this domain. People with high cognitive CQ have a thorough understanding of how cultural differences affect communication, judgment, and behavior in the workplace. Employees with cognitive CQ in organizational settings can appropriately perceive cross-cultural events and react based on knowledge rather than presumptions or preconceptions. This knowledge-based element is essential for managing multicultural settings and promoting productive cooperation in global and varied teams.

Cognitive cultural intelligence (CQ) is one of the four dimensions of the Cultural Intelligence Scale (CQS) discussed by Ang et al., (2007). This was measured by using six specific items. These items assess an individual's awareness of and control over their thought processes related to culture.

This study uses six measurement items derived from Ang et al., (2007).

- COG1: I know the legal and economic systems of other cultures.

- COG2: I know the rules (e.g., vocabulary and grammar) of other languages.
- COG3: I know the cultural values and religious beliefs of other cultures.
- COG4: I know the marriage systems of other cultures.
- COG5: I know the arts and crafts of other cultures.
- COG6: I know the rules for expressing nonverbal behaviors in other cultures.

3. Motivational CQ:

Motivational Cultural Intelligence (CQ) encompasses the drive, interest, and confidence necessary for effective engagement with individuals from diverse cultural backgrounds. It involves intrinsic motivation and self-efficacy, which are crucial for successful functioning in multicultural environments, particularly among employees of multinational corporations. This dimension was assessed using the five items developed by Ang et al., (2007).

- MOT1: I enjoy interacting with people from different cultures.
- MOT2: I am confident that I can socialize with locals in a culture unfamiliar to me.
- MOT3: I am sure I can deal with the stress of adjusting to a culture that is new to me.
- MOT4: I enjoy living in unfamiliar cultures.
- MOT5: I am confident that I can get accustomed to shopping conditions in a different culture.

1.7.5 Multinational Financial Institutions in Sierra Leone

1.7.5.1 Multinational Company

Multinational corporations (MNCs) are businesses that function in several countries and manage production or offer services beyond their home nation's borders. An MNC is characterized by its units spread across different locations, with its main office and subsidiaries situated in various countries (Sageder & Feldbauer-Durstmüller, 2019). These corporations are vital to the global economy as they promote international trade, investment, and the exchange of technology. MNCs frequently establish subsidiaries, branches, or joint ventures in overseas markets to access new customers, reduce costs, and utilize local resources. Their worldwide operations allow them to take advantage of economies of scale and spread-out risks, although they face intricate challenges, such as dealing with different regulatory systems, cultural variations, and geopolitical threats. The strategic management of MNCs requires balancing global integration with local adaptability to enhance performance and sustain competitive advantage.

1.7.5.2. Multinational Financial Institution

A multinational financial institution operates across various countries and offers a comprehensive range of financial services, including banking, investment management, insurance, and asset management. These organizations play a crucial role in facilitating global trade, capital flows, and economic growth by providing international financial products and services to businesses, governments, and individual clients (Abiola-Adams et al., 2025). They must

adeptly navigate complex regulatory frameworks in different regions, while managing the risks associated with currency fluctuations, political instability, and diverse market conditions. Their global operations enable them to leverage economies of scale, access diverse markets, and contribute to global financial integration and stability.

According to Earley & Ang, (2003) and Ang et al., (2007), Cultural Intelligence (CQ) plays a critical role in determining how individuals adapt and perform in multicultural environments, making it highly relevant in multinational organizations. Multinational financial companies doing business in Sierra Leone are the subject of the data for this study, with special focus on Eco Bank, UBA, FirstBank, Access Bank and other comparable establishments that have a staff that is culturally diverse and includes both local and foreign workers. These organizations are vital to Sierra Leone's economic recovery following the conflict and are situated in intricate cultural contexts where successful cross-cultural cooperation is necessary for day-to-day operations.

In Sierra Leone, there has been a significant rise in the presence of multinational corporations (MNCs), especially in industries like mining, finance, telecommunications, and agriculture. These corporations have played a crucial role in the country's economic recovery after conflict and in boosting foreign direct investment. However, (Singh, 2024) state that MNCs often face distinct cultural and organizational challenges, such as language differences, diverse work ethics, hierarchical social structures, and varying communication norms, which can impede effective collaboration and productivity. The nation's intricate

sociocultural landscape, influenced by traditional values, post-colonial legacies, and regional diversity, necessitates a sophisticated approach to managing human resources. Therefore, examining Cultural Intelligence (CQ) in this setting is vital, as it offers valuable insights into how MNCs can navigate these complexities, build cohesive multicultural teams, and improve organizational performance within the unique Sierra Leonean context.

This research focuses on multinational financial institutions, especially those in Sierra Leone, as the subject of this study because they offer an engaging setting in which Cultural Intelligence (CQ) is not only theoretical but also crucial for daily operations. These companies usually have a mix of local and foreign employees, which makes it easy for people from different cultures to communicate.

1.8 Research Framework

1.8.1 Knowledge Management

The present research employs the theoretical framework of Knowledge Management (KM), situating Cultural Intelligence (CQ) as a form of intangible knowledge capital that plays a pivotal role in augmenting employee productivity within multinational corporations. The investigation focuses on three CQ dimensions metacognitive, cognitive, and motivational as essential components that may influence employee engagement and productivity in culturally heterogeneous work environments. By articulating CQ in this manner, the study accentuates its strategic significance in empowering employees to adeptly navigate cultural variances, particularly in complex and post-conflict contexts

such as Sierra Leone. Furthermore, employee productivity is delineated as the quantifiable output of both individual and team performance that is in alignment with organizational objectives.

Cultural intelligence (CQ), which includes knowledge, awareness, motivation, and behavioral flexibility, is the capacity to adjust successfully in culturally heterogeneous settings Earley & Ang, (2003). Beyond theoretical frameworks, CQ influences daily organizational operations in the context of multinational corporations (MNCs) doing business in Sierra Leone. Understanding cultural norms, such as the collectivist principles of Sierra Leone, is a component of cognitive CQ, whereas metacognitive CQ allows workers to consider their presumptions when interacting with people from different cultures (Ang., 2007).

Within this scholarly framework, the research investigates the mechanisms through which Cultural Intelligence (CQ) facilitates the process of knowledge sharing, augments cross-cultural communication, and bolsters interpersonal trust fundamental elements underscored in Social Exchange Theory and Hofstede's Cultural Dimensions Theory. These theoretical perspectives substantiate the proposition that employees possessing higher levels of cultural intelligence exhibit greater adaptability and collaboration, resulting in enhanced productivity and organizational cohesiveness. As a quantitative investigation, this study articulates several hypotheses that examine the direct impacts of each dimension of CQ on productivity, alongside the mediating influence of employee engagement initiatives. These hypotheses endeavor to furnish empirical evidence

that correlates CQ with productivity within multinational corporations (MNCs), thereby offering both theoretical contributions and practical implications for human resource strategies in developing economies.

A multitude of Researchers have tried to explore the field of cultural intelligence and how it affects the behavior of individuals in different sectors. According to Chatterjee et al., (2023), Cultural intelligence (CQ), which includes employees' knowledge, abilities, and flexibility in a variety of cultural situations, is a crucial part of intellectual capital and human capital. According to the article, human and structural capital greatly improve knowledge searching and sharing among subsidiaries in digital platform-based multinational enterprises (MNEs), especially when negotiating culturally disparate contexts. Having this cultural flexibility is essential for creating non-market solutions that work. According to the study, these tactics, which are made possible by cultural intelligence, enhance collaboration, coordination, and eventually business performance. As a result, CQ serves as strategic knowledge capital in knowledge management, promoting information sharing and boosting organizational performance in global operations.

Research carried out by Tavoletti et al. (2024) examine that the performance of global virtual teams (GVTs) depends on CQ, which is the capacity to work well in culturally heterogeneous environments, as the essay illustrates. It is a dynamic, practical form of knowledge that helps teams overcome cultural gaps and is gained via experience, introspection, and cross-cultural engagement. The study highlights that CQ is a key intangible asset-knowledge capital-that directly contributes to team effectiveness in multicultural, knowledge-intensive

workplaces by showing that teams with high CQ and cognitive ability (IQ), even from lower-ranked universities, function at high levels.

It is possible to think about cultural intelligence as a type of knowledge management, more precisely as knowledge capital. In addition to explicit data, (Massa & Testa, 2009) emphasize that knowledge also includes tacit, experience-based, and cultural components that are essential for creating a competitive edge. Focus groups and CRM systems are two examples of the processes used in their case study of Company C to actively collect, preserve, exchange, and apply customer-related cultural knowledge, such as preferences for traditional and local items. This type of cultural intelligence enables the business to maintain its brand image, avoid market blunders (like the unsuccessful coffee machine initiative), and match its products with consumer expectations. In order to maintain organizational competitiveness, cultural intelligence functions as symbolic knowledge capital, a crucial intangible resource that is strategically managed inside a knowledge management system.

In addition to the above, within the framework of knowledge management, cultural intelligence (CQ) can be thought of as a type of knowledge capital, which is a valuable, intangible resource made up of abilities, information, and cultural awareness that people use to traverse a variety of environments. According to the article Figueroa & Hofhuis, (2024), CQ is a dynamic skill that can be developed via focused intercultural education and training. This is consistent with the fundamental principles of knowledge management, which place an emphasis on producing, improving, and using knowledge for strategic benefit. In particular,

Although CQ is commonly conceptualized as consisting of four dimensions, this study specifically focuses on three dimensions: metacognitive, cognitive, and motivational CQ. These dimensions are selected because they are directly aligned with the research model and the hypotheses tested in this study.

Cultural intelligence (CQ) can be considered a form of knowledge management, particularly as knowledge capital. The article explicitly supports this by describing CQ as a “practical and adaptive intelligence” rooted in “learned skills that are critical for functioning effectively in culturally diverse environments,” which can be developed through “education, training, and experience” Webb et al. (2024) It also emphasizes how CQ comprises four interrelated Drive, Knowledge, Strategy, and Action that are measurable, improvable, and necessary for successful cross-cultural interaction. These elements which are characteristics of knowledge management systems represent an organized method of gaining, organizing, and using cultural information. In order to illustrate how CQ functions as knowledge capital that promotes better decision-making and equity in healthcare delivery, the paper highlights how CQ development improves inclusive healthcare practices by influencing pain assessment methodologies that take cultural diversity into account.

Furthermore, an article by Tesfaye et al. (2025) backs up the notion that cultural intelligence (CQ) serves as a type of knowledge capital, especially when it comes to intercultural competency and teacher preparation. According to the study, cultural quotient (CQ) is a knowledge-based, trainable talent whose cognitive and metacognitive components directly represent an individual's cultural

awareness and understanding. "Awareness of cultural cues and the ability to understand and acquire cultural knowledge during intercultural interactions" are part of the metacognitive component, whereas "knowledge of cultural norms and practices acquired through education and personal experiences" is part of the cognitive dimension. According to the study, teacher candidates' mean Cultural Intelligence (CQ) score was 66.05, which suggests above-average cultural competency. The average scores for the four components of CQ were 17.38 for behavioural intelligence, 19.07 for cognitive, 16.25 for motivational, and 13.34 for metacognitive. Additionally, above average was the mean academic self-efficacy score of 68.59. Gender and urban/rural origin did not significantly affect CQ scores, according to the analysis. Nonetheless, a minor but statistically significant positive association ($r = 0.23$, $p < .05$) was found between academic self-efficacy and overall CQ, indicating that academic confidence is somewhat correlated with cultural intelligence.

The theoretical framework for this study is based on the idea that cultural intelligence is an essential part of knowledge capital in multinational corporations (MNCs). According to Azizjalloah, (2015), cultural intelligence is a strategic asset in expatriate management that helps firms integrate varied foreign teams and match different cultural viewpoints with operations in the host country. Through the incorporation of both explicit and tacit information, this notion of cultural intelligence expands the scope of traditional knowledge management and makes it easier to integrate global human resource strategies. The study backs up this claim by showing how cultural intelligence fosters intercultural cooperation and

decision-making, which not only boosts individual expatriate performance but also propels organizational growth and competitive advantage.

According to Livermore et al. (2022) a dynamic set of interrelated knowledge and abilities, organizational cultural intelligence (CQ) helps businesses successfully traverse challenging, culturally diverse environments. It claims that lowering uncertainty and adjusting to changing business conditions require CQ knowledge, or an awareness of the implicit cultural presumptions underlying organizational practices like hiring, marketing, and decision-making. From their result, Organizational CQ is critical for navigating today's volatile, uncertain, complex, and ambiguous (VUCA) world. Organizations with high CQ adapt better to disruption, engage diverse customers and talent effectively, improve M&A outcomes, develop resilient and inclusive cultures through explicit, dynamic routines in hiring, learning, sharing, and decision-making.

Finally, the concept of Cultural Intelligence as knowledge capital can be effectively framed within the theoretical lens of Customer Experiential Knowledge Management (CEKM), as proposed by Jaziri, (2019). CEKM places a strong emphasis on turning actual consumer experiences both online and offline into useful tacit knowledge that businesses can use to spur innovation and gain a competitive edge. The notion that cultural intelligence, which is ingrained in people's experiences, values, and emotions, is an essential type of knowledge capital is supported by this paradigm. It is therefore consistent with the dynamic theory of organizational knowledge production, which emphasizes the importance of tacit knowledge application and externalization for innovation. Thus, with

CEKM as a theoretical basis, cultural intelligence can be viewed as an organizational asset that can be strategically used for experiential innovation and value generation, rather than just as a behavioural ability Jaziri, (2019).

Although Cultural Intelligence (CQ) is increasingly acknowledged as a vital element for boosting organizational performance, there are notable gaps in the literature, especially concerning the West African region. There is a scarcity of comparative or localized research exploring the connection between CQ and employee productivity in nations such as Sierra Leone. Most studies have been conducted in developed or rapidly industrializing countries, with minimal focus on culturally diverse, post-conflict, and developing economies. Additionally, empirical research using validated tools like the Cultural Intelligence Scale (CQS) is lacking in Sierra Leone, making it challenging to assess CQ levels or compare results across different settings. This lack of localized data hinders the understanding of how CQ functions in environments where cultural norms, power structures, and communication styles differ significantly from those in Western contexts.

Moreover, the current body of research reveals inconsistencies regarding which aspects of cultural intelligence (metacognitive, cognitive, and motivational) significantly impact productivity. Some research points out that motivational drive or cognitive and metacognitive comprehension are more reliable indicators of workplace success. This issue is further complicated by the varied metrics used to define and measure productivity across different studies, which hampers comparability and generalizability. Additionally, many theoretical models are

based on Western-centric perspectives, which may not adequately reflect the unique socio-cultural and organizational context of Sierra Leone. Consequently, there is a pressing need for research that is contextually relevant, incorporating local customs, communication styles, and socio-economic challenges to better understand the practical effects of CQ in Sierra Leone's multinational corporate environment.

Teamwork, leadership, flexibility, and creativity are among the fundamental components of organizational efficiency that are improved by Cultural Intelligence (CQ), according to a comprehensive review of regional and international literature. People with high CQ are better able to negotiate cultural differences, establish trust, and minimize misunderstandings, all of which enhance teamwork, communication, and task completion. CQ has been demonstrated to promote psychological safety, knowledge sharing, and problem-solving skills in multinational corporations (MNCs), especially those that operate in culturally diverse environments. These effects have a direct impact on organizational outcomes and employee productivity.

The results of this review provide strong evidence for the necessity for empirical studies conducted locally that place the function of CQ in the particular sociocultural and business context of Sierra Leone. International frameworks are useful, but they frequently ignore the subtleties of post-conflict communities, informal work practices, and hierarchical workplace systems that exist in underdeveloped nations like Sierra Leone. Thus, this study aims to close that gap by modifying well-known CQ models, including the Cultural Intelligence Scale

(CQS), to evaluate the ways in which each CQ dimension affects productivity in multinational corporations based in Sierra Leone. This localized approach is crucial for both theoretical advancement and the generation of useful insights pertinent to local business situations.

The research emphasizes how crucial it is to incorporate CQ into MNCs' HRM procedures from a practical perspective. Employers should place a high priority on CQ-based onboarding and training initiatives that give staff members the tools they need to work well in diverse teams. In order to respect local customs and proactively resolve cross-cultural disputes, HR departments can also put in place culturally adaptive policies. Additionally, metrics that evaluate workers' cross-cultural collaboration should be incorporated into performance evaluation systems in order to identify and reward cultural adaptability as a strategic competency. In addition to increasing employee engagement and retention, these initiatives will boost organizational agility and competitiveness in the rapidly changing economic environment of Sierra Leone.

The examined literature confirms that in multinational corporations (MNCs), Cultural Intelligence (CQ) is a critical strategic asset that enhances employee productivity. It improves teamwork, communication, and creativity in culturally heterogeneous groups. Studies that are contextualized to Sierra Leone, where organizational problems and cultural dynamics differ from those in more frequently researched locations, do, nevertheless, noticeably lack this information. An empirical examination into the relationship between CQ and productivity in Sierra Leonean multinational corporations is well-founded by this review. The

study intends to close this gap by producing fresh, context-specific insights that can guide scholarly discussions and useful managerial techniques in comparable emerging economies.

1.9 Previous Studies

There have been a few researchers to study Cultural intelligence (CQ) in various organization, education, healthcare and multinational settings. Earley & Ang, (2003) defined CQ as the ability of an individual to function effectively in culturally diverse environments as the foundation for Cultural Intelligence (CQ). Later, Ang et al. (2007) created the Cultural Intelligence Scale (CQS) as the primary tool to assess CQ dimensions. Van Dyne et al., (2012) also elaborated on the concept of CQ by explaining the sub-dimensions of CQ and Ng et al., (2009) emphasized that CQ can be developed through experiential learning and intercultural exposure.

Previous studies have also investigated the link between Cultural Intelligence (CI) and employee outcomes. In multicultural workplaces, Presbitero, (2017) reported that CQ is related to employee adaptation and performance. Jyoti & Kour, (2017) demonstrated that CQ has a positive influence on job performance and Bücken et al., (2014) found that CQ enhances communication effectiveness, job satisfaction and cross-cultural adjustment. Korzilius et al., (2017) also demonstrated the association between CQ and multiculturalism and innovative work behavior. CQ has been linked to employee engagement and burnout by Min et al., (2023b) and Peng et al., (2015) put the attention on motivational CQ for cultural adaptation and intercultural effectiveness. The studies suggest that

overall, CQ is positively related to employee attitudes, adaptation and performance.

There have also been previous studies on the relationship between CQ and team performance, leadership and multinational work groups. Groves & Feyerherm, (2011) explored the relationship between leader CQ and team diversity, and Rockstuhl et al., (2011) explored how leader CQ relates to cross-border leadership effectiveness. Che Rose et al., (2010) investigated expatriate performance and CQ, Tavoletti et al., (2024) explored team CQ and global virtual team performance. The studies reveal that, beyond its individual value CQ is significant at the team and leadership levels, particularly in multicultural organisations.

The studies from the knowledge management point of view argue that Cultural Intelligence might be considered as an invisible source of knowledge. Chatterjee et al., (2023) explored the relationship between intellectual capital, knowledge sharing, and the performance of digital multinational companies. Massa & Testa, (2009) demonstrated that knowledge management has a positive impact on innovation and competitive advantage. Jaziri, (2019) discussed experiential knowledge management and Livermore et al., (2022) explained organizational cultural intelligence as a capacity that enhances adaptability and organizational effectiveness. These studies are relevant to the current research as they demonstrate that Cultural Intelligence is seen as an knowledge capital, and is a way by which employees can gain understanding of cultural differences, share knowledge, communicate effectively and boost productivity.

The correlation of employee engagement and employee productivity has also been paid attention in previous studies. Hanaysha, (2016b) discovered that the staff engagement and factors in the workplace are a positive influence on employee productivity. However, AbuKhalifeh & Som, (2013) demonstrated that employee engagement is related to organizational performance. Cesário & Chambel, (2017) connected organizational commitment, work engagement and employee performance; and Schaufeli et al., (2006) offer an important foundation for the measurement of work engagement. The author Bukhari et al., (2025) also confirmed the role of employee engagement as a mechanism related to CQ and workplace behavior. Therefore, the utilization of employee engagement as a mediator variable in the current study is justified by these studies.

This study takes the previous studies and modifies them by studying the direct and indirect effects of metacognitive cultural intelligence, cognitive cultural intelligence, and motivational cultural intelligence on employee productivity through employee engagement. This study differs from previous studies that primarily looked at CQ in various organizational, educational, healthcare, virtual-team or Western settings, because it concentrates on multinational financial corporations in Sierra Leone. Hence, this study adds to the existing literature by offering empirical evidence from a post-conflict developing economy where cultural diversity, cross-cultural communication, and employee productivity are significant issues for organization

Table 1. Similarities and Differences of the Studies

No.	Researcher & Year	Research Variables	Mediator	Moderator	Path	Sector
1	Earley & Ang (2003)	Cultural cross-cultural effectiveness	Intelligence, —	—	CQ → Cross-cultural effectiveness	Cross-cultural individual interaction
2	Ang et al. (2007)	Metacognitive Cognitive Motivational Behavioral CQ	CQ, CQ, CQ, —	—	CQ dimensions → Intercultural effectiveness	International professionals and students
3	Van Dyne et al. (2012)	Four-factor dimensions	CQ —	—	CQ dimensions → Cross-cultural functioning	Cross-cultural organizational context
4	Ng, Van Dyne, & Ang (2009)	CQ, experiential learning capability	—	—	Intercultural experience → CQ development	Cross-cultural learning context
5	Presbitero (2017)	CQ, employee adaptation, employee performance	—	—	CQ → Employee adaptation and performance	Multicultural workplace
6	Bücker et al. (2014)	CQ, communication effectiveness, job satisfaction, anxiety	—	—	CQ → Communication effectiveness and job satisfaction	Cross-cultural workplace
7	Jyoti & Kour (2017)	CQ, job performance	—	—	CQ → Job performance	Organizational employees
8	Korzilius et al. (2017)	Multiculturalism, innovative work behavior	CQ, —	—	CQ → Innovative work behavior	Multicultural workplace

No.	Researcher & Year	Research Variables	Mediator	Moderator	Path	Sector
9	Min et al. (2023)	CQ, employee engagement, burnout, job satisfaction	Employee engagement	—	CQ → Employee engagement / burnout	Service and multicultural workplace
10	Peng et al. (2015)	Motivational CQ, cultural adjustment, intercultural effectiveness	—	—	Motivational CQ → Cultural effectiveness	Cross-cultural work context
11	Le et al. (2021)	Metacognitive CQ, adaptation, well-being	—	—	Metacognitive CQ → Adaptation and well-being	Multicultural context
12	Groves & Feyerherm (2011)	Leader CQ, team diversity, team performance	—	Team diversity	Leader CQ → Team performance	Team and leadership context
13	Rockstuhl et al. (2011)	CQ, cross-border leadership effectiveness	—	—	CQ → Leadership effectiveness	Global leadership context
14	Che Rose et al. (2010)	CQ, expatriate performance	—	—	CQ → Expatriate performance	International assignment / expatriate context
15	Tavoletti et al. (2024)	Team IQ, Team CQ, global virtual team performance	—	Interaction effects	Team CQ → Team performance	Global virtual teams
16	Chatterjee et al. (2023)	Human capital, structural capital, knowledge sharing, firm performance	Knowledge sharing / coordination	—	Knowledge capital → Firm performance	Digital multinational enterprises
17	Massa & Testa (2009)	Knowledge domain, innovation behavior, knowledge management	Knowledge management system	—	Knowledge management → Competitive	Small and medium-sized enterprises

No.	Researcher & Year	Research Variables	Mediator	Moderator	Path	Sector
		system			advantage	
18	Jaziri (2019)	Customer knowledge, experiential innovation, competitive advantage	Customer experiential knowledge	Digital environment	Experiential knowledge → Innovation	Digital service industry
19	Livermore et al. (2022)	Organizational adaptability, organizational effectiveness	Organizational CQ, Organizational routines	VUCA	Organizational CQ → Organizational effectiveness	Modern organizations
20	Webb et al. (2024)	CQ, inclusive professional practice, decision-making	Inclusive practices	Bias awareness	CQ → Inclusive decision-making	Healthcare context
21	Figuroa & Hofhuis (2024)	Intercultural training, CQ development	—	—	Training → CQ	Intercultural education and training
22	Tesfaye et al. (2025)	CQ, academic self-efficacy	—	Demographic variables	CQ → Academic self-efficacy	Education
23	Hanaysha (2016)	Employee engagement, workplace factors, employee productivity	—	—	Employee engagement → Employee productivity	Organizational employees
24	AbuKhalifeh & Som (2013)	Employee engagement, organizational performance	—	—	Employee engagement → Organizational performance	Organizational / service context
25	Cesário & Chambel (2017)	Organizational commitment, engagement, work employee	Work engagement	—	Work engagement → Employee performance	Workplace context

No.	Researcher & Year	Research Variables	Mediator	Moderator	Path	Sector
		performance				
26	Schaufeli et al. (2006)	Work engagement measurement	—	—	Vigor, dedication, absorption → Work engagement	General employee context
27	Bukhari et al. (2025)	CQ, constructive deviance, employee engagement	Employee engagement	—	CQ → Employee engagement → Workplace behavior	Organizational context
28	Sageder & Feldbauer-Durstmüller (2019)	Management control, multinational corporations	—	—	Management control → MNC effectiveness	Multinational corporations
29	Singh (2024)	Cross-cultural management, multinational corporations	—	—	Cross-cultural management → Organizational effectiveness	MNC context
30	Jalloh (2015)	IHRM practices, cultural diversity, expatriate adjustment	Expatriate adjustment	Host-country context	Cultural diversity → Expatriate performance	Multinational companies
31	Abiola-Adams et al. (2025)	Multinational institutions, financial management	—	—	Strategic management → Financial institution performance	Multinational financial institutions
32	Present Study / Kamara (2026)	Metacognitive Cognitive Motivational Employee Engagement, CQ, CQ, CQ, Employee Engagement,	Employee Engagement	—	CQ dimensions → Employee Engagement → Employee	Multinational financial corporations in Sierra Leone

No.	Researcher & Year	Research Variables	Mediator	Moderator	Path	Sector
		Employee Productivity			Productivity	

This study is unique in a number of ways. First, previous studies have mostly focused on Cultural Intelligence in the Western context, educational context, healthcare context, service context, virtual-team context, or general multinational context, and few studies have been conducted on the multinational financial corporations context in Sierra Leone. Secondly, most previous studies investigated Cultural Intelligence as a general concept while this study studied the influence of metacognitive CQ, cognitive CQ and motivational CQ on employee engagement and employee productivity. Third, there are previous studies that look at employee engagement as an outcome, but there aren't a lot of studies that look at the mediating variable between CQ dimensions and employee productivity. Fourth, the previous research has separately discussed CQ, performance and knowledge management, but the present study deals with all three in a combined manner as CQ is one form of intangible knowledge assets that can enhance the employee engagement and performance.

Thus, the research gap this study seeks to fill is the empirical evidence of the role played by specific dimensions of Cultural Intelligence in improving employee productivity through employee engagement in the multinational financial corporations in Sierra Leone. This gap is significant due to Sierra Leone's culturally diverse, post-conflict, developing economy, the existence of multicultural issues in cross-cultural communication, work value differences, and limited structured CQ development programs for multinational corporations. The present study fulfills this gap, thereby adding to the body of literature on Cultural

Intelligence and Knowledge Management, Employee Engagement and Employee Productivity in underrepresented African multinational business contexts.

1.10 Hypothesis Development

1.10.1 The Effect of Metacognitive Cultural Intelligence on employee engagement

Metacognitive cultural intelligence, a dimension of cultural intelligence (CQ), plays a pivotal role in enhancing employee engagement across diverse organizational environments. This cognitive faculty enables individuals to critically assess and modify their cultural understanding during engagements with persons from disparate cultural milieus Ang et al., (2007). Employees exhibiting heightened metacognitive CQ are more proficient in maneuvering through cross-cultural interactions, which culminates in improved communication, collaboration, and overall job satisfaction. Empirical investigations have corroborated a positive association between metacognitive CQ and employee engagement. For instance, Korzilius et al. (2017) discovered that employees with elevated levels of metacognitive CQ exhibited augmented work engagement and organizational commitment. Similarly, Presbitero (2017) noted that metacognitive CQ exerted a beneficial effect on employee adaptation and performance within culturally heterogeneous work environments. These findings suggest that organizations may bolster employee engagement by promoting the development of metacognitive CQ via cross-cultural training initiatives and the formation of diverse teams. The enhancement of metacognitive CQ can be advanced through a range of organizational strategies, including international assignments, cultural immersion experiences, and mentorship programs. By allocating resources to

these developmental avenues, organizations can refine their employees' capacity to navigate intricate cultural landscapes and foster a more inclusive workplace atmosphere.

Furthermore, leaders possessing high metacognitive CQ can act as role models, motivating their subordinates to cultivate analogous cognitive competencies and nurturing a culture of cultural consciousness and adaptability throughout the organization. Based on the theory and previous studies, the hypotheses can be developed as follows:

H1: Metacognitive Cultural Intelligence has a significant positive effect on Employee Engagement.

1.10.2 The Effect of Cognitive Cultural Intelligence on employee engagement.

Employee engagement is significantly influenced by cognitive cultural intelligence (CQ), especially in workplaces with a diverse workforce. This aspect of CQ relates to a person's ability to learn, understand, and use cultural knowledge in a way that promotes meaningful interactions amongst workers from various cultural backgrounds. According to research, cognitive CQ is a crucial psychological and interpersonal tool in multicultural workplaces that greatly improves employee engagement, Min et al. (2023). Superior cross-cultural communication, flexibility, and problem-solving skills are displayed by workers with high cognitive CQ, and these traits all help to boost engagement and job happiness.

According to Bückner et al. (2014), cognitive CQ abilities help people effectively understand and negotiate cultural differences, which enhances interpersonal connections and lowers workplace anxiety. Research has indicated a

robust correlation between cognitive CQ and job satisfaction, with those with higher CQ levels reporting better involvement in their work and more effective communication Bücken et al., (2014); Jyoti & Kour, (2017). Additionally, through effective cross-cultural knowledge and interaction, cognitive CQ improves employees' ability to adapt to culturally diverse contexts, which in turn promotes job performance Jyoti & Kour, (2017). Workers with high cognitive CQ have more communication skills and flexibility, which are essential for succeeding in multicultural workplaces. This leads to increased job satisfaction and engagement (Bücken et al., 2014; Che Rose et al., 2010; Jyoti & Kour, 2017).

Empirical evidences have consistently supported a positive correlation between cognitive CQ and employee engagement in work places. Employees with high levels of cognitive CQ easily demonstrate greater work engagement, organizational commitment, and job performance within multicultural contexts. Furthermore, the development of cognitive CQ can be determined through targeted organizational initiatives such as cross-cultural training programs, diverse team projects, and international assignments. By investing in these developmental opportunities, organizations can strengthen employees' abilities to navigate complex cultural dynamics, thereby cultivating a more engaged, adaptive, and productive workforce.

Based on the theory and previous studies, the hypotheses can be developed as follows:

H2: Cognitive Cultural Intelligence has a significant positive effect on Employee Engagement.

1.10.3 The Effect of Motivational Cultural Intelligence on employee engagement

Enhancing employee engagement in culturally diverse workplaces is mostly dependent on motivational cultural intelligence (CQ). In order to communicate and work together with coworkers from diverse cultural backgrounds, an individual's inherent motivation, interest, and drive to perform well in culturally diverse environments are referred to. Empirical studies demonstrate that motivational CQ is an essential personal asset that promotes engagement and reduces burnout. For example, motivational CQ was found to be a significant predictor of employee engagement and burnout in research of restaurant workers in Hawaii, underscoring its critical role in preserving motivation and well-being in multicultural settings, Min et al. (2023).

Additionally, it has been demonstrated that in multicultural teams, the interaction between a supervisor's and employee's CQ improves retention and work engagement. Known as the "double CQ effect," this phenomenon implies that raising CQ levels in managers and staff members improves commitment, engagement, and organizational effectiveness Presbitero et al. (2025). Furthermore, it has been discovered that motivational CQ can indirectly affect job happiness by improving engagement, which in turn extends its effects on more general workplace attitudes and behaviors.

Effective cross-cultural teamwork and the promotion of diversity are greatly aided by employees with high motivational CQ. In culturally heterogeneous environments, motivational CQ encourages curiosity, openness, and proactive involvement, all of which enhance psychological health and cultural

adaptability. People with higher motivational CQ are more able to handle cross-cultural pressures, which makes them more appropriate for cross-cultural tasks and overseas assignments (Peng et al., 2014). High motivating CQ also improves interpersonal connections and communication, which promotes inclusion and a sense of belonging in workplaces. Motivational CQ eventually helps to create a more cohesive, flexible, and cooperative work environment by empowering staff members to overcome cultural differences and handle diversity with compassion and understanding Peng et al. (2015).

Based on the theory and previous studies, the hypotheses can be developed as follows:

H3: Motivational Cultural Intelligence has a significant positive effect on Employee Engagement

1.10.4. The Effect of Metacognitive Cultural Intelligence on employee Productivity

Metacognitive Cultural Intelligence (CQ) is a vital cognitive capability that enables individuals to reflect on, manage, and adapt their cultural understanding, thereby enhancing their proficiency in navigating cross-cultural interactions. Individuals with high metacognitive CQ exhibit superior communication skills that facilitate bridging cultural divides and promote effective collaboration with colleagues from diverse backgrounds. This enhanced communication efficiency contributes to improved problem-solving, as teams can draw on a variety of perspectives and approaches.

Furthermore, robust metacognitive CQ offers greater adaptability, allowing rapid adjustments in strategies and behaviors to align with different

cultural contexts Le et al. (2021). The benefits of metacognitive CQ extend beyond individual performance and impact organizational outcomes. As employees become more adept at managing cultural differences, organizations can foster a more inclusive work environment that values diversity and encourages innovation. Such an inclusive atmosphere is associated with increased employee engagement and job satisfaction, both critical for productivity Min et al. (2023). Additionally, employees with high metacognitive CQ are better equipped to undertake international assignments and manage global projects, thereby enhancing an organization's capacity to operate effectively in diverse markets. By minimizing cultural misunderstandings and conflicts, metacognitive CQ helps reduce turnover rates and improve the retention of diverse talent, ultimately boosting overall organizational productivity and competitiveness in the global market Click or tap here to enter text.

Based on the theory and previous studies, the hypotheses can be developed as follows:

H4: Metacognitive Cultural Intelligence has a positive relationship with Employee Productivity

1.10.5. The Effect of Cognitive Cultural Intelligence on employee Productivity

Cognitive Cultural Intelligence (CQ) equips individuals with the mental ability to understand, evaluate, and effectively manage various cultural settings, significantly enhancing employee productivity. Employees with high cognitive CQ possess a deep grasp of cultural norms, values, and practices, allowing them to adjust their behavior and communication styles accordingly Patricia Diane

Mouboua et al., (2024). According to Putra et al. (2023) flexibility improves interpersonal relations, reduces misunderstandings, and enhances teamwork in diverse groups. As a result, cognitive CQ supports quicker decision-making, encourages innovative problem-solving by utilizing diverse viewpoints, and ensures smoother interactions, all contributing to increased productivity.

Additionally, cognitive CQ boosts workplace satisfaction and engagement, further enhancing employee productivity. Those with higher cognitive CQ show greater resilience and are less susceptible to burnout, as they are better prepared to handle the stress and cultural challenges of cross-cultural interactions. This mental toughness helps employees maintain motivation and focus in culturally varied environments. Moreover, cognitive CQ fosters an inclusive workplace culture where diverse contributions and ideas are appreciated and incorporated into organizational processes. By encouraging knowledge sharing, creativity, and collaboration among team members from different cultural backgrounds, this inclusive environment not only improves individual performance but also boosts group productivity (Basnet, 2024).

Based on the theory and previous studies, the hypotheses can be developed as follows:

H5: Cognitive Cultural Intelligence has a significant positive effect on Employee Productivity

1.10.6. The Effect of Motivational Cultural Intelligence on employee Productivity

Motivational cultural intelligence is essential for increasing worker productivity because it fosters flexibility and fortitude in a variety of work

settings. Improved communication and collaboration are made possible by employees with high motivated cultural intelligence who show a greater desire for cross-cultural encounters. Since these people are more likely to take into account other viewpoints and methods, their increased participation leads to more successful problem-solving. When workers apply their cultural knowledge and abilities to overcome obstacles and grasp opportunities, companies gain from more innovation, creativity, and general production (Presbitero et al., 2025b).

Furthermore, by reducing cultural miscommunications and disputes, motivating cultural intelligence helps to create a healthy work environment. Building trust, navigating cultural nuances, and forging strong cross-cultural connections are all made easier for employees with high motivational cultural intelligence. As a result, team cohesion and productivity are increased in a more welcoming and peaceful workplace. As a result, companies see enhanced productivity in cross-cultural projects and efforts, decreased employee attrition, and better employee satisfaction Eden et al., (2024).

Based on the theory and previous studies, the hypotheses can be developed as follows:

H6: Motivational Cultural Intelligence affect positively Employee Productivity

1.10.7 The Effect of Employee Engagement on Employee Productivity

Employee productivity is significantly affected by employee engagement because motivated, committed, and discretionary workers are more likely to be engaged in their organizational duties. This kind of involvement fosters a favorable emotional and psychological bond between workers and their

companies, which in turn leads to improved output quality and performance results.

Extensive empirical data supports this association. For example, according to Ajewumi, (2024) engaged workers are more likely to devote more time and effort to their work, which leads to increased productivity (AbuKhalifeh & Som, 2013) early, (AbuKhalifeh & Som, 2013) found that employee engagement lowers absenteeism and turnover intentions, which, in turn, improves productivity indirectly by stabilizing the workforce and lowering training and recruitment costs. Additional data indicate that engagement improves workers' emotional and cognitive capacities, allowing them to handle the demands and difficulties of their jobs better, which in turn improves task accuracy and completion rates.

Additionally, it has been determined that positive leadership and a positive work atmosphere are important mediating elements that raise engagement levels and, as a result, increase productivity results Engelbrecht et al., (2014). All the existing research confirms that companies that put employee engagement first regularly see quantifiable gains in output, operational effectiveness, and overall competitive advantage.

Based on the theory and previous studies, the hypotheses can be developed as follows:

H7: Employee Engagement has a significant positive effect on Employee Productivity

1.10.8. The mediating effect of Employee engagement on the link between Metacognitive Cultural Intelligence and Employee Productivity

Employee engagement plays a vital role as an intermediary in the relationship between metacognitive cultural intelligence and productivity. Metacognitive cultural intelligence involves employees' ability to consciously reflect on and manage their cultural assumptions and strategies while working in diverse environments. This reflective skill allows individuals to foresee cultural differences, modify their behavior, and use suitable communication methods, thereby promoting more effective collaboration and conflict resolution across cultural lines (Min et al., 2023a).

By boosting employees' cultural awareness and adaptability, metacognitive cultural intelligence strengthens their emotional and cognitive ties with their work. Employees who feel adept at navigating multicultural settings experience increased confidence, clarity in their roles, and a sense of psychological safety, which, in turn, enhances their engagement. Employee engagement, which is marked by enthusiasm, dedication, and deep involvement in work tasks, represents a positive motivational state that directly contributes to improved performance (Anaza et al., 2016).

Engaged employees exhibit greater concentration, resilience when facing challenges, and willingness to exert extra effort beyond basic job duties. These behaviors result in increased efficiency, higher-quality outcomes, and innovative problem solving, ultimately boosting overall productivity. Thus, employee engagement acts as a channel that converts the cognitive benefits of metacognitive cultural intelligence into tangible performance enhancement.

In summary, when employees possess strong metacognitive cultural intelligence, they are better equipped to succeed in culturally diverse settings, which boosts their engagement, and consequently, their productivity. This highlights the importance of fostering both cultural intelligence and engagement strategies to optimize organizational success in multicultural environments.

Based on the theory and previous studies, the hypotheses can be developed as follows:

H8: Employee Engagement will mediate the link between Metacognitive Cultural Intelligence and Employee Productivity

1.10.9. The mediating effect of Employee engagement on the link between Cognitive Cultural Intelligence and Employee Productivity

Employee engagement is instrumental in bridging the gap between cognitive cultural intelligence (CQ) and productivity (Bukhari et al., 2025). It functions as a mechanism through which an understanding of cultural differences is translated into effective and sustained work performance. Cognitive CQ, which encompasses an individual's knowledge and mental capacity to comprehend cultural norms, values, and practices, enables employees to appropriately interpret and respond to culturally diverse situations. This cognitive ability mitigates cultural friction and misunderstandings, thus fostering a more inclusive and harmonious workplace. Consequently, employees with higher cognitive CQ are more likely to experience a sense of belonging and psychological safety, which are crucial drivers of employee engagement.

When employees are mentally equipped to navigate cultural complexities, they become more confident and comfortable with their interactions, leading to

increased motivation and emotional investment in their work. This heightened engagement manifests as greater enthusiasm, commitment, and persistence in job tasks, which directly affects productivity. Engaged employees are more proactive, collaborative, and willing to exceed their formal job requirements, leveraging their cultural knowledge to facilitate smoother teamwork and innovation across diverse groups. Furthermore, according to Cesário and Chambel, (2017), employee engagement helps sustain these positive behaviors over time, ensuring that the benefits of cognitive CQ are not fleeting, but contribute to long-term organizational performance.

In summary, employee engagement acts as a vital link that converts the intellectual and perceptual advantages of cognitive CQ into practical observable outcomes in the workplace. By strengthening employees' emotional and motivational connections to their roles, engagement amplifies the impact of cultural intelligence on productivity, making it a critical focus area for organizations seeking to maximize the value of a culturally diverse workforce. This mediation underscores the importance of promoting both cultural competence and engagement initiatives to enhance employee output and organizational success.

Based on the theory and previous studies, the hypotheses can be developed as follows:

H9: Employee Engagement will mediate the link between Cognitive Cultural Intelligence and Employee Productivity

1.10.10. The mediating effect of Employee engagement on the link between Motivational Cultural Intelligence and Employee Productivity

Employee engagement acts as a crucial link between motivational Cultural Intelligence (CQ) and employee productivity, functioning as the psychological channel through which motivational CQ affects work outcomes. Motivational CQ involves an individual's inherent interest, confidence, and drive to adapt to and perform effectively in culturally diverse settings (Presbitero et al., 2025b). Employees with high motivational CQ are more likely to feel a strong sense of belonging and alignment with the values and goals of a multicultural organization. This alignment boosts employee engagement, which is marked by emotional investment, enthusiasm, and a proactive attitude towards work responsibilities. The boost in employee engagement due to motivational CQ occurs because culturally motivated employees tend to handle cross-cultural interactions with greater ease and positivity, thereby minimizing stress and misunderstandings that could impede their commitment. This increased engagement results in greater vigor, dedication, and absorption in work tasks, which are crucial dimensions that lead to enhanced productivity. Engaged employees are more likely to demonstrate discretionary effort, creativity, and persistence, all of which contribute to superior individual and organizational performance. Additionally, the mediating role of employee engagement indicates that motivational CQ does not affect productivity in isolation, but operates through the motivational and emotional states of employees. By nurturing motivational CQ, organizations can indirectly boost productivity levels by fostering an engaged workforce that values diversity and is motivated to contribute meaningfully. This highlights the strategic importance of developing cultural motivation initiatives, such as training programs and inclusive

leadership practices, to enhance employee engagement and consequently improve productivity outcomes in increasingly globalized and diverse work environments (Min et al., 2023a); (Peng et al., 2015).

H10: Employee Engagement will mediate the link between motivational Cultural Intelligence dimensions and Employee Productivity

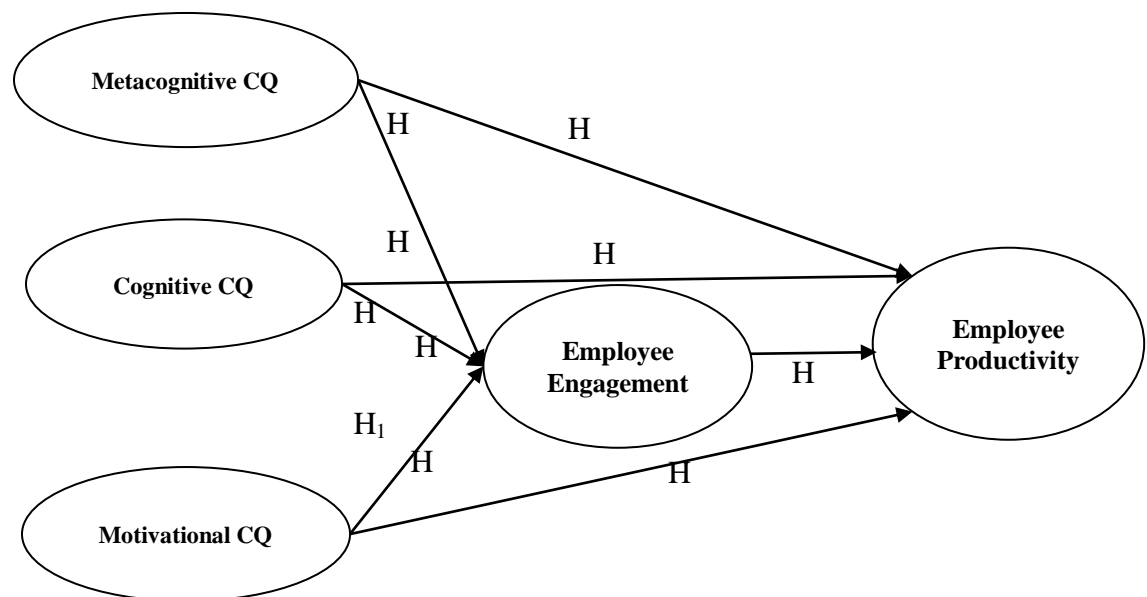


Figure 1. Hypothesis Model

- The three dimensions of Cultural Intelligence (CQ) metacognitive CQ, cognitive CQ, and motivational CQ serve as independent variables..
- Employee Engagement as a mediating variable.
- Employee Productivity as the dependent variable.

1.11 Conceptual and Operational Definition

1.11.1 Conceptual Definitions

Cultural Intelligence (CQ)

Cultural Intelligence is delineated as an individual's capacity to operate and manage proficiently within culturally heterogeneous contexts ((Earley & Ang, (2003).

Employee Productivity

Employee productivity pertains to the efficiency and effectiveness with which an individual accomplishes work-related objectives and tasks. It includes the quality and quantity of output, adherence to deadlines, collaboration, innovation, and the achievement of goals within the organizational framework. Enhancing employee productivity is a critical objective for any organization, as highly productive employees can significantly impact overall organizational performance (Hanaysha, 2016b).

Employee Engagement (Mediator)

Employee engagement is conceptualized as the extent of commitment, enthusiasm, and emotional investment that employees exhibit towards their work and organization.

1.11.2 Operational Definitions

In the present investigation, the variables are operationalized through quantifiable indicators derived from established measurement instruments and survey methodologies. In this study, Cultural Intelligence (CQ) is conceptualized as an individual's capacity to operate effectively in culturally diverse environments, with a particular focus on multinational corporations in Sierra Leone. The construct was assessed using the Cultural Intelligence Scale (CQS) developed and validated by Ang et al., (2007). The CQS examines four distinct variables of CQ (Metacognitive, Cognitive, Motivational, and Behavioral) that collectively encapsulate the ability to adapt across cultural contexts. Participants indicated their level of agreement with each statement on a 7-point Likert scale (1

= Strongly Disagree to 7 = Strongly Agree). Each statement was rated on a 5-point Likert scale ranging from Strongly Agree, Agree, Neutral, Disagree, to Strongly Disagree. These variables are:

a. Metacognitive CQ:

Metacognitive CQ: The cognitive capacity to acquire and modify cultural knowledge. Metacognitive measured with 4 items. The four measurement items for Metacognitive CQ are:

1. MC1: I am conscious of the cultural knowledge I use when interacting with people from different cultural backgrounds.
2. MC2: I adjust my cultural knowledge as I interact with people from a culture unfamiliar to me.
3. MC3: I am conscious of the cultural knowledge that I apply to cross-cultural interactions.
4. MC4: I check the accuracy of my cultural knowledge as I interact with people from different cultures.

Scale: 1=Strongly Agreed to 5=Strongly Disagree

b. Cognitive CQ:

Comprehensive knowledge and comprehension regarding various cultures, measured with 6 items:

1. COG1: I know the legal and economic systems of other cultures.
2. COG2: I know the rules (e.g., vocabulary, grammar) of other languages.
3. COG3: I know the cultural values and religious beliefs of other cultures.

4. COG4: I know the marriage systems of other cultures.
5. COG5: I know the arts and crafts of other cultures.
6. COG6: I know the rules for expressing nonverbal behaviors in other cultures.

Scale: 1=Strongly Agreed to 5=Strongly Disagree

c. Motivational CQ:

The impetus and inclination to acclimate to novel cultural environments, measured with 5 items. The five measurement items for Motivational CQ (MOT) are:

1. MOT1: I enjoy interacting with people from different cultures.
2. MOT2: I am confident that I can socialize with locals in a culture unfamiliar to me.
3. MOT3: I am sure I can deal with the stress of adjusting to a culture that is new to me.
4. MOT4: I enjoy living in unfamiliar cultures.
5. MOT5: I am confident that I can get accustomed to shopping conditions in a different culture.

Scale: 1= Strongly Disagree to 5= Strongly Agreed

d. Employee Productivity

Employee productivity was evaluated using four key dimensions: amount of output, quality of output, efficiency ratios, and time management. These dimensions were derived from Sauermann, (2023), who emphasized that productivity is a complex concept involving both the quantity and quality of the

work results. This research will use eight measurement items in four dimensions.

They are:

d.1 Output Quantity

This dimension evaluates the volume of work completed within a specific timeframe. It measures the extent to which employees meet or exceed their organizations' performance targets. It measures with 2 items:

1. I complete required work within expected timeframes.
2. My work output meets or exceeds organizational targets.

Scale: 1= Strongly Disagree to 5= Strongly Agreed

d.2 Output Quality

Quality represents the accuracy and completeness of the work performed relative to the established standards (Sauermann, 2023). This reflects the degree to which employees deliver outputs that meet or surpass organizational expectations. It measures with 2 items:

1. My work meets the standards expected by my supervisor or organization.
2. I produce work that requires minimal corrections or revisions.

Scale: 1= Strongly Disagree to 5= Strongly Agreed

d.3 Efficiency Ratios

Efficiency assesses how effectively employees use their time, effort, and resources to achieve the desired results. This is consistent with Sauermann, (2023) view that performance should account for the worker's control over inputs and outcomes. It measures with 2 items:

1. I accomplish tasks using minimal time and resources.

2. I balance time, effort, and resources to achieve desired results.

Scale: 1= Strongly Disagree to 5= Strongly Agreed

d.4 Time Management

This measures how well employees plan and utilize their time to meet deadlines and schedules, aligning with Sauermann's emphasis on time-sensitive performance indicators. It is measured with 2 items:

1. I complete tasks and projects within deadlines.
2. I manage my time to ensure tasks are completed as scheduled.

Scale: 1= Strongly Disagree to 5= Strongly Agreed

f. Employee Engagement

Employee Engagement study conceptualizes work engagement as comprising three key dimensions, based on Schaufeli et al., (2006) and Afsar., et al (2020).

This research will look at 5 measurement items in 3 dimensions:

f.1 Vigor: High levels of energy, mental resilience, and persistence at work. It is measured with 2 items:

1. In my work, I feel I have plenty of energy.
2. At my job, I feel strong and vigorous.

Scale: 1= Strongly Disagree to 5= Strongly Agreed

f.2 Dedication: Strong involvement in one's work, enthusiasm, pride, and challenge. It is measured with 2 items:

1. My work is challenging.
2. I am enthusiastic about my job

Scale: 1= Strongly Disagree to 5= Strongly Agreed

f.3 Absorption: Being deeply engrossed in one's work where time passes quickly.

It is measured with 1 item: Time flies when I am working.

Scale: Strongly Agreed to Strongly Disagree.

Table 1. 3 Variable Measurements

Variable	Indicators	Items
Metacognitive CQ Ang et al. (2007)	<ul style="list-style-type: none"> • Awareness of cultural assumptions • Adjusting cultural knowledge • Planning for intercultural interactions • Monitoring cultural understanding 	<ul style="list-style-type: none"> • 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 unfamiliar to me. • I am conscious of the cultural knowledge that I apply to cross-cultural interactions. • I check the accuracy of my cultural knowledge as I interact with people from different cultures.
Cognitive CQ Ang et al. (2007)	<ul style="list-style-type: none"> • Knowledge of cultural norms • Understanding of legal/economic systems • Knowledge of values, beliefs, and communication styles • Understanding of leadership styles 	<ul style="list-style-type: none"> • 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 nonverbal behaviors in other

		cultures.
Motivational CQ Ang et al. (2007)	<ul style="list-style-type: none"> • Interest in cross-cultural interaction • Confidence in cross-cultural settings • Drive to adapt to cultural diversity • Willingness to learn from other cultures 	<ul style="list-style-type: none"> • I enjoy interacting with people from different cultures. • I am confident that I can socialize with locals in a culture unfamiliar to me. • I am sure I can deal with the stress of adjusting to a culture that is new to me. • I enjoy living in unfamiliar cultures. • I am confident that I can get accustomed to shopping conditions in a different culture.
Employee Productivity Sauermann, Jan (2023)	<ul style="list-style-type: none"> • Output Quantity <hr/> <ul style="list-style-type: none"> • Output Quality <hr/> <ul style="list-style-type: none"> • Efficiency Ratios <hr/> <ul style="list-style-type: none"> • Time Management 	<ul style="list-style-type: none"> • I complete required work within expected timeframes. • My work output meets or exceeds organizational targets. <hr/> <ul style="list-style-type: none"> • My work meets the standards expected by my supervisor or organization. • I produce work that requires minimal corrections or revisions. <hr/> <ul style="list-style-type: none"> • I accomplish tasks using minimal time and resources. • I balance time, effort, and resources to achieve desired results. <hr/> <ul style="list-style-type: none"> • I complete tasks and projects within deadlines. • I manage my time to ensure tasks are completed as

			scheduled.
Employee Engagement (Mediator)	<ul style="list-style-type: none"> • Vigor 		<ul style="list-style-type: none"> • In my work, I feel I have plenty of energy. • At my job, I feel strong and vigorous.
Schaufeli et al. (2006); Afsar et al. (2020)	<ul style="list-style-type: none"> • Dedication 		<ul style="list-style-type: none"> • My work is challenging. • I am enthusiastic about my job.
	<ul style="list-style-type: none"> • Absorption 		<ul style="list-style-type: none"> • Time flies when I am working.

1.12 Research Methods

This research utilizes a quantitative methodological framework to systematically investigate the relationship between Cultural Intelligence (CQ) and employee productivity within multinational corporations (MNCs) operating in Sierra Leone. The study adopts a survey-based methodology, collecting primary data through structured questionnaires administered to employees and managers within selected multinational financial institutions.

The empirical data were collected from four major multinational banks operating in Sierra Leone, namely Ecobank, First Bank Sierra Leone, Access Bank, and United Bank for Africa. These institutions were purposively selected due to their strong presence in the Sierra Leonean financial sector and their characteristics as multinational corporations with culturally diverse workforces. As subsidiaries of large international banking groups, these organizations employ both local and expatriate staff, making them suitable contexts for examining the role of cultural intelligence in influencing employee productivity. Additionally,

their accessibility and willingness to participate in the study ensured the feasibility and reliability of data collection.

Data collection was conducted over a specified period (3 months from November to January 2025), during which questionnaires were distributed both electronically to respondents. This timeframe was chosen to ensure adequate response rates and to capture consistent organizational conditions across the selected institutions.

The questionnaire incorporates established and validated measurement instruments, including the Cultural Intelligence Scale (CQS) developed by Ang et al., (2007), to assess the dimensions of cultural intelligence (metacognitive, cognitive, and motivational). Employee productivity was measured using structured performance indicators such as task completion, efficiency, and goal achievement.

Descriptive and inferential statistical techniques, including correlation and regression analyses, were employed to test the proposed hypotheses and examine the strength and direction of relationships among the variables. The use of a quantitative approach ensures objectivity, reliability, and statistical rigor in evaluating the impact of cultural intelligence on employee productivity in multinational corporate settings.

1.12.1 Research type

This study used an explanatory survey as its quantitative research method. The goal of this strategy is to look into and clarify the causal links between variables, particularly how the various facets of Cultural Intelligence (CQ) affect

worker productivity in multinational companies (MNCs) doing business in Sierra Leone. Through the use of standardized questionnaires and statistical analysis of the answers, the study aims to test theories and determine how much CQ predicts or explains differences in productivity. The explanatory survey approach is suitable for this study since it makes it possible to gather quantitative information from a sizable sample, which permits extrapolation of the results and the discovery of noteworthy trends and correlations among variables.

1.12.2 Research variables

The study encompasses independent, dependent, and mediating, factors that embody the theoretical framework and guide the empirical inquiry:

a. Independent Variables:

The three dimensions of Cultural Intelligence (CQ) use in this research, measured separately as:

1. **Metacognitive CQ** – awareness and control of cultural knowledge.
2. **Cognitive CQ** – knowledge of cultural systems, norms, and practices.
3. **Motivational CQ** – interest and drive to adapt to cross-cultural situations.

➤ **Dependent Variable:**

Employee Productivity, which includes indicators such as Output Quantity, Output Quality, Efficiency Ratios and Time Management.

b. Mediating Variable:

Employee Engagement, which reflects the emotional and psychological involvement of employees in their work and organization, potentially explaining how CQ influences productivity.

To evaluate the proposed hypotheses through quantitative analysis, these variables are defined using standardized tools and measures of organizational performance.

1.12.3. Types and Sources of Data

This research employs both primary and secondary data sources to facilitate the quantitative analysis.

Primary Data: The primary data will be gathered through structured questionnaires given to employees at selected multinational corporations (MNCs) in Sierra Leone, focusing on the financial institutions like Eco Bank, First Bank, United Bank of Africa and Access Bank. These questionnaires aim to gather information on the three aspects of Cultural Intelligence (CQ) dimensions, indicators of employee productivity, levels of engagement, and training experiences. The use of standardized tools, like the Cultural Intelligence Scale (CQS), guarantees the reliability and validity of the construct measurements.

Secondary Data: Additional information will be collected from organizational resources such as performance evaluation records, training guides, HR policy documents, and company reports. These materials will offer contextual understanding and assist in confirming or cross-verifying the findings from the primary data.

By integrating both data types, the research ensures a more thorough and evidence-based examination of how CQ affects employee productivity in multicultural work settings.

1.12.4 Population and Sampling Techniques

This study focuses on employees and managers working in multinational corporations (MNCs) operating in Sierra Leone, with particular emphasis on the financial sector. Specifically, the research considers institutions such as EcoBank, UBA, FirstBank, and Access Bank. These organizations were selected due to their culturally diverse workforce and well-established human resource systems, which provide a suitable context for examining the relationship between Cultural Intelligence (CQ) and employee productivity. The total population for this study consists of 990 employees across the selected banks, from which a sample of 113 respondents was drawn. All respondents were employees within these institutions.

The sampling technique adopted for this study is proportional random sampling. This method ensures that each organization is represented in proportion to its population size, thereby enhancing the representativeness of the sample. Within each bank, respondents were selected randomly to capture diversity across departments, job levels, and cultural backgrounds. This approach allows for balanced representation and supports meaningful comparisons among different subgroups within the workforce.

The determination of the sample size was guided by statistical considerations to ensure adequacy for quantitative analysis. Proportional allocation was applied to distribute the sample across the four banks based on their respective employee populations. This ensures that larger organizations contribute more respondents while smaller ones are still adequately represented. The use of proportional random sampling strengthens the reliability and

generalizability of the findings, as it reflects the actual structure of the population under study.

1.12.5 Data Collection Technique

The main method for gathering data in this study involves distributing structured questionnaires to targeted employees within selected multinational financial institutions operating in Sierra Leone. These questionnaires contain closed-ended questions rated on a 5-point Likert scale and address three main areas: Cultural Intelligence dimensions, employee engagement, and employee productivity. To evaluate CQ, the Cultural Intelligence Scale (CQS) developed by Ang et al., (2007) was adapted, while employee productivity was measured using self-reported performance indicators.

To accommodate different levels of accessibility and technological resources among organizations, the questionnaires will be distributed in digital (online) formats. Before they are widely distributed, a pilot test will be carried out to verify the instruments' clarity, reliability, and validity. Additionally, to enhance the accuracy of the survey data, secondary data from organizational records, such as performance reports or HR documents, may be gathered if available. Participation will be voluntary, and anonymity will be preserved to promote honest and unbiased responses.

1.12.6 Data Analysis Techniques

This study's data analysis approach uses both descriptive and inferential statistical techniques, which are processed by statistical software like SmartPLS or SPSS.

First, a summary of the respondents' demographics, levels of Cultural Intelligence (CQ), and productivity metrics will be provided using descriptive statistics (mean, standard deviation, frequency, and percentage). This will assist in locating broad patterns and trends within the sample.

The research hypotheses will then be tested using inferential statistical methods. The associations between staff productivity and the CQ characteristics will be investigated using Pearson correlation analysis. The predictive ability of the independent variables (CQ dimensions) on the dependent variable (productivity) will be evaluated using multiple regression analysis. Additionally, to ascertain whether employee engagement mediates the relationship between CQ and productivity, a mediation study will be performed using either bootstrapping techniques or the Baron and Kenny approach. A significance level of 0.05 will be used to interpret the findings of these studies.

These statistical methods will allow the researcher to empirically validate the conceptual framework and provide meaningful insights into how CQ influences productivity in multinational corporations in Sierra Leone.