



INVESTIGATING THE INFLUENCE OF MANAGERIAL COMPETENCE ON
MANAGERIAL EFFECTIVENESS AND TEAM COHESION IN SMALL AND MEDIUM
ENTERPRISES IN THE NIGERIAN OIL AND GAS INDUSTRY, PORT HARCOURT

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By Adokiye Obele Umuteme

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Doctor of Philosophy (PhD) in Business

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Abstract

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This study investigates the competencies required by SME owners to enhance managerial effectiveness and team cohesion, addressing a gap in the literature on managerial competence in small and medium enterprises. The research focuses on the Nigerian oil and gas industry, a context in which indigenous capacity development is a national priority. The study examines the direct effects of managerial competence on managerial effectiveness and team cohesion, and further explores the potential moderating effects of role ambiguity and role conflict on the relationship between team cohesion and managerial effectiveness. Previous studies have largely overlooked these relationships, highlighting the need for an integrated framework linking managerial competencies to team and organizational outcomes.

A quantitative research approach was adopted, guided by a positivist philosophical stance. Data were collected through a cross-sectional survey, yielding 211 usable responses from SME employees. Structural Equation Modelling (SEM) was employed for data analysis, including descriptive statistics, regression, correlation, and model-fit assessments. Key constructs were measured using validated instruments, ensuring reliability and alignment with the study objectives, while ethical standards were adhered to according to the Unicaf University Research Ethics Committee (UREC).

Findings indicate that three core managerial competencies—problem-solving, effective leadership, and efficient decision-making—significantly enhance managerial effectiveness.

Team cohesion mediates this relationship through two dimensions: task cohesion (cooperation and collaboration) and social cohesion (inclusion and diversity). Contrary to expectations, role conflict and role ambiguity do not significantly moderate the link between team cohesion and managerial effectiveness in contexts where managers encourage innovation and the workforce is experienced and educated. These results support the development of a framework to strengthen managerial competence and team bonding in SMEs.

The study contributes to theory and practice by linking managerial competencies to team and SME growth, and offering insights for policymakers, SME owners, and funding agencies regarding capacity development and eligibility for support. The findings also provide a foundation for further research on managerial competence, team dynamics, and organizational effectiveness in SMEs across different sectors and cultural contexts.

Keywords: Small and Medium Enterprise (SME); Managerial Competencies; Managerial Effectiveness, Team Cohesion; Uncertainty Management; Structural Equation Model

Declaration

I declare that this thesis has been composed solely by myself and that it has not been submitted, in whole or in part, in any previous application for a degree. Except where stated otherwise by reference or acknowledgment, the work presented is entirely my own.

AI Acknowledgment

I acknowledge my use of Chat GBT (<https://chat.openai.com/>) and Grammerly to improve, correct and proofread chapters 1, 2, 3, 4 and 5 of my thesis. This action was completed in 11.02.2026.

The prompts used included: Improve text, shorten text and correct grammar for the text below.

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Dedication

This research is dedicated to God Almighty, who possesses all wisdom and has given me the strength to complete this PhD. I would also like to take this opportunity to thank my husband, Dr. Oghenethoja Umuteme, and my beloved children - Elomezino, Aghoghomena, Ewevino, and Onavize, and to my younger sister, Stephanie Ereme Jack, for their unwavering support throughout this PhD journey.

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List of Abbreviations

AVE	Average Variance Extracted
CBN	Central Bank of Nigeria
CB-SEM	Covariance Based - Structural Equation Model
CPI	Consumer Price Index
CI	Cognitive Intelligence
EI	Emotional Intelligence
FSS	Financial System Strategy
GDP	Gross Domestic Product
HTMT	Heterotraitmonotrait Ratio
MC	Managerial Competence
ME	Managerial Effectiveness
NBS	National Bureau of Statistics
NNPC	Nigerian National Petroleum Corporation
PLS	Partial Least Square
PLS-SEM	Partial Least Square - Structural Equation Model
RA	Role Ambiguity
RC	Role Conflict
SME	Small and Medium Enterprise
SEM	Structural Equation Model
SI	Social Intelligence
TC	Team Cohesion
TCSC	Team Cohesion-Social Cohesion
TCTC	Team Cohesion-Task Cohesion
UMT	Uncertainty Management Theory

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CHAPTER 1: INTRODUCTION

The Nigerian oil and gas sector is largely concentrated in the Niger Delta region, with major operators including Shell, Agip, Mobil, Total, Chevron, NNPC, and Renaissance Energy Africa. Over the past decades, the industry has evolved into the backbone of Nigeria's economy, contributing about 90% of national revenue (NNPC, 2020). Nigeria produces over one million barrels of oil per day, generating approximately \$50 million daily at a benchmark price of \$50 per barrel. While multinational corporations dominate the industry, small and medium-sized enterprises (SMEs) play a critical and complementary role. These SMEs provide a wide range of services, including maintenance, procurement, manpower development, environmental management, and logistics support. Strengthening SMEs in this sector is essential not only for operational efficiency but also for fostering local participation, capacity building, and economic empowerment, as emphasized by local content policies.

Despite the importance of SMEs, the broader Nigerian economic context poses significant challenges. According to the National Bureau of Statistics (NBS, 2022), unemployment has reached 33.3%, while GDP growth remains low, contributing to a series of economic recessions between 2016 and 2021. High bank lending interest rates have constrained business growth, with rates consistently above 20% and a prime lending rate of 27.65% reported in 2022 (CBN, 2022). Meanwhile, inflation has remained above 15% (NBS, 2022), eroding purchasing power and increasing operational costs. These macroeconomic conditions are compounded by insufficient infrastructure, including unstable electricity supply, poor road networks, limited security, and inadequate transport systems (Oyelaran-Oyeyinka, 2020). Together, these factors make the business environment for SMEs extremely challenging, limiting investment, reducing job creation, and heightening poverty levels. Consequently, there is a critical need for research to identify strategies that can enhance SME resilience and contribute to sustainable economic growth.

Previous studies have identified both operational and managerial factors as key contributors to SME failure. Funding gaps, managerial inefficiencies, and skill deficits among owners and employees have been consistently cited as causes of early SME closure (Agwu & Emeti, 2014; Igwe et al., 2024; Milošević et al., 2019). Globally, SMEs are regarded as the backbone of the modern economy, providing employment, fostering innovation, and contributing to national development (ESPON, 2020). In Europe, SMEs are defined as enterprises with 10–249 employees (ESPON, 2020), while the Financial System Strategy (FSS, 2020) defines Nigerian SMEs as organizations with 10–250 employees (Oyelaran-Oyeyinka, 2020). In other developing countries, SMEs are defined differently: less than 100 employees in China and Singapore, less than 200 in Vietnam, and less than 300 in Korea. Despite these variations, SMEs universally contribute to employment, poverty alleviation, and economic development. Enhancing SME growth through better policies, access to finance, and managerial training is therefore essential for reducing failure rates and strengthening their role in both national and global economies.

Managerial competence is critical for SME survival and growth. Yet, evidence suggests that many SME managers operate with significant skill gaps, particularly in strategic areas such as business planning, resource coordination, and risk management (NES, 2019). Efficient business planning is fundamental, reflecting a manager's ability to think critically, plan proactively, and lead effectively. Absence of planning often leads to poor decision-making, misallocation of resources, and constrained growth prospects. This challenge is compounded in labor-intensive SMEs, where managers must coordinate a workforce with diverse skills and capabilities. Effective managerial practices are therefore essential for aligning team efforts, maintaining cohesion, and achieving organizational objectives.

In SMEs, managerial effectiveness is closely tied to team cohesion. Task cohesion—referring to shared commitment to goals and objectives—ensures coordinated efforts and

higher performance (Dinh & Salas, 2017; Salas et al., 2015). Social cohesion, encompassing inclusion, interpersonal relationships, and collaboration, enhances communication, morale, and engagement among team members. Studies indicate that managers who demonstrate competence in leadership, decision-making, conflict resolution, change management, and employee development positively influence team cohesion (Breeze, 1995; Chikwe & Biriowu, 2019; Lara & Salas-Vallina, 2017; Parker & Ritson, 2005). Consequently, managerial effectiveness in SMEs depends not only on technical or operational skills but also on the ability to foster cohesive, motivated, and high-performing teams.

Effective managerial competence entails a variety of skills, including communication, planning, time management, creativity, crisis management, conflict resolution, counselling, and leadership in change processes (Diskiene et al., 2018; Fonceca et al., 2017). For task cohesion, managers must define roles clearly, set measurable objectives, encourage knowledge sharing, manage crises impartially, and facilitate participatory decision-making (Buchanan & Huczynski, 2017; Dasgupta & Gupta, 2009; Edwards, 2005). For social cohesion, managers must foster positive interpersonal interactions, mitigate non-productive behaviors, and respect cultural and social differences within teams (Drew & Bensley, 2001; Schein, 2010). Properly managed task and social cohesion enhances both team performance and managerial effectiveness, allowing SMEs to achieve their strategic objectives even under resource constraints.

The relationship between managerial competence, team cohesion, and managerial effectiveness is particularly significant in SMEs characterized by informal managerial structures and highly labor-intensive operations (Agwu & Emeti, 2014; Bouzari et al., 2023). A competent manager ensures that both task and social cohesion yield positive outcomes, converting potential challenges in team interactions into productivity and innovation gains. While lack of funding is often cited as a key contributor to SME failure, inadequate managerial

skills—particularly in team management—also critically affect SME sustainability and growth.

Globally, the importance of managerial competence for SME growth is further underscored by the increasing number of SMEs in developed economies. For example, Statista reports that the European Union had 26.1 million SMEs as of August 2024, up from 22.6 million in 2021 (Dabić & Kraus, 2023; Espinosa, 2024). Despite this growth, there is no widely accepted theory of SME development, although scholars such as Dabić and Kraus (2023) advocate for frameworks that emphasize innovation and entrepreneurship. Similarly, Rodrigues et al. (2021) highlight the critical role of managerial and strategic competencies as determinants of SME success, suggesting the need for comprehensive frameworks that integrate leadership, innovation, and entrepreneurship to guide sustainable growth.

The Nigerian oil and gas industry provides an ideal context to investigate these relationships. Having evolved over 50 years of foreign participation since the discovery of oil in 1956 (NNPC, 2020), the sector has created significant opportunities for SME involvement. Local content policies, including the Nigerian Oil and Gas Industry Content Development Act (Nigerian Government, 2010) and recent guidelines to enhance SME sustainability (Bassey, 2025), encourage participation of indigenous firms and create an enabling environment for growth. Access to funding is often contingent upon demonstrating managerial competence, further emphasizing the relevance of examining the link between managerial skills, team cohesion, and effectiveness in this sector.

In sum, the study addresses a critical gap in understanding how managerial competencies influence team cohesion and managerial effectiveness in SMEs within the Nigerian oil and gas industry. By integrating the dimensions of task and social cohesion, leadership and decision-making competencies, and industry-specific contextual factors, this research provides a foundation for enhancing SME sustainability, informing policy, and

contributing to broader economic development objectives. Understanding these relationships can help SME owners and policymakers develop targeted interventions, improve workforce management, and ensure the long-term growth and resilience of SMEs in a challenging economic and infrastructural environment.

Statement of the Problem

The survival and growth of small and medium-sized enterprises (SMEs) in Nigeria critically depend on managerial competence and access to adequate funding. While the Nigerian oil and gas industry offers substantial opportunities for SME development and local content enhancement, the sustainability of these enterprises remains uncertain. If SMEs fail to thrive, local empowerment, job creation, and economic diversification will be significantly undermined. According to the Nigerian definition, SMEs employ between 10 and 250 people and represent a central pillar of the global economy (SMEDAN/NBS, 2017). Nigeria alone hosts over 670,000 SMEs, which have the potential to generate employment and contribute meaningfully to the nation's GDP (NES, 2019; SMEDAN/NBS, 2017). Despite this, the long-term sustainability of SMEs is threatened by both internal and external factors, with studies indicating that most SMEs struggle to survive beyond five years due to managerial incompetence, inadequate funding, and limited access to credit (Agwu & Emeti, 2014; Chikwe & Biriowu, 2019; Josiah et al., 2016; Milošević et al., 2019; Rodrigues et al., 2021). These challenges continue to hinder SME growth, innovation, and competitiveness, demonstrating the need for targeted research on managerial competence as a determinant of organizational success.

The significance of SMEs to Nigeria's economic development cannot be overstated. With a projected population nearing 400 million by 2050—over 60% of whom will be under 35—Nigeria's youthful population offers vast potential for private-sector-led growth (NES, 2019). SMEs, which constitute over 90% of businesses and contribute approximately 50% to

national GDP, are essential for job creation, innovation, and sustainable development. Nevertheless, the Nigerian economic environment presents considerable obstacles. High bank lending rates, exceeding 20% and reaching 27.65% in 2022 (CBN, 2022), coupled with persistent inflation above 15% (NBS, 2022), inadequate infrastructure, and insecurity, create a challenging operating environment for SMEs (Oyelaran-Oyeyinka, 2020). Without deliberate interventions to strengthen managerial skills, these external pressures exacerbate the risks of business failure, limiting the ability of SMEs to harness their economic potential.

Although government initiatives, such as low-interest loans and disbursements through the Bank of Industry (BOI) amounting to 56.4 billion Naira (\$37.4 million) in 2023 alone, aim to support SME growth (BOI, 2023), the lack of managerial competence remains a critical barrier. Ineffective management often leads to poor utilization of financial resources, suboptimal decision-making, weak team coordination, and missed opportunities for innovation. This highlights a knowledge gap: while funding can enable SME operations, the effectiveness of these interventions depends on the owners' and managers' ability to leverage their skills strategically. Addressing this gap requires a deeper understanding of how managerial competence influences organizational outcomes, particularly managerial effectiveness and team cohesion, which are key predictors of SME performance (Salas et al., 2015; Fonceca et al., 2017).

Empirical and theoretical evidence underscores the role of managerial competence in sustaining SME growth. According to the theory of action and job performance (Boyatzis, 2008), managers must efficiently mobilize and coordinate resources—both human and financial—to achieve organizational goals (Daft, 2012; Jones & George, 2016). Studies in Port Harcourt have demonstrated a positive link between managerial competence and innovation in SMEs (Chikwe & Biriowu, 2019), yet limited research has examined the causal relationships between managerial skills, team cohesion, and managerial effectiveness in this context. Team

cohesion, both in its task-related and social dimensions, significantly affects organizational performance, emphasizing the need for managers who can foster cooperation, collaboration, and positive workplace interactions (Salas et al., 2015; Fonceca et al., 2017).

The problem is further compounded by the highly labor-intensive nature of SMEs in Nigeria, characterized by informal managerial structures and a workforce with varying levels of skill and training (Agwu & Emeti, 2014; Bouzari et al., 2023; Oyelaran-Oyeyinka, 2020). Managers must therefore possess competencies not only in planning, decision-making, and resource allocation, but also in leadership, conflict resolution, change management, and employee development. Weaknesses in these areas undermine team cohesion, reduce productivity, and increase the likelihood of failure, despite external support such as funding and government policies. Addressing these internal competency gaps is essential to improving SME resilience, enhancing resource utilization, and ensuring that SMEs contribute effectively to local empowerment, employment generation, and broader economic development.

In essence, the core problem addressed by this study is the insufficient managerial competence among SME owners and managers in Nigeria, particularly within the oil and gas sector. While SMEs have the potential to drive economic growth, employment, and innovation, their sustainability is threatened by skill deficits that hinder effective team management and strategic decision-making. The research aims to examine how managerial competencies influence managerial effectiveness and team cohesion, identify the dimensions of competence most critical for SME success, and provide insights that can guide policy, training, and strategic interventions. By doing so, the study seeks to fill a significant knowledge gap, support sustainable SME growth, and strengthen the contribution of SMEs to Nigeria's economic and social development.

Purpose of the Study, Research Aims, and Objectives

Purpose of the Study

This study closes the gap in the literature of the need to provide further insight into the competencies needed by the owners of SMEs to enhance managerial effectiveness and team cohesion (mediator) under the moderating effect of role ambiguity and role conflict. Therefore, the purpose of this study is to provide further insight into the direct causal effect of managerial competence (predictor – independent variable) on managerial effectiveness (dependent variable) and team cohesion (mediator) in SMEs, with a moderation effect of uncertainty management (moderation variable) on the link between team cohesion and managerial effectiveness. The study is conducted in the Nigerian oil and gas industry, Port Harcourt. This study is premised on the fact that SMEs are characterised by the following from the literature (Agwu & Emeti, 2014; Egbu et al., 2005): (1) a centralised decision making process, being the sole responsibility of the owner/manager and (2) high-intensive labour force.

While decision making determines the organisation's managerial effectiveness, intensive-labour workforce demands a manager with the competence that can enhance productive team cohesiveness. Already, the cause-effect link between managerial competence and managerial effectiveness has been studied (Fonceca et al., 2017), and teamwork is linked to the existence of task and social cohesion in another study (Salas et al., 2015). Adopting a descriptive quantitative research approach in this study, statistical applications was employed to analyse the data that was retrieved using the survey data collection approach. The statistical approach developed a structural equation model (SEM) for regression, correlation, and path-analysis.

Therefore, the operationalisation of the these four variables was achieved according to the to the outcomes of the studies on managerial competence (Boyatzis, 1982; Chikwe & Biriowu, 2019; Sangka et al., 2019); managerial effectiveness (Analoui, 1999; Analoui et al.,

2010; Fonceca et al., 2017); team cohesion (Salas et al., 2015; Wageman et al., 2005) and uncertainty management (Maden-Eyiusta, 2021). The questions in the online closed-ended questionnaire were designed according to the order determined by the purpose of this study stated earlier and the research hypotheses. The questionnaire comprised 57 questions designed to measure the four key concepts in this study. Each item was developed using a 5-point Likert scale, ranging from “Strongly Disagree” to “Strongly Agree,” to ensure consistent measurement.

Research Aims

The main aim of this study is to provide further insights into how the dimensions of managerial competence enhance managerial effectiveness and team cohesion under the moderating effect of role ambiguity and role conflict. The study is conducted in the Nigerian oil and gas industry, Port Harcourt.

Research Objectives

To achieve the aim of this study stated above, the objectives of this study were as follows:

- (1). Investigate the direct relationship between managerial competence and managerial effectiveness in SMEs in the Nigerian oil and gas industry, Port Harcourt;
- (2). Assess how team cohesion mediates the relationship between managerial competencies and effectiveness in SMEs in the Nigerian oil and gas industry, Port Harcourt; and;
- (3). Evaluate how role ambiguity and role conflict moderate the relationship between team cohesion and managerial effectiveness in SMEs in the Nigerian oil and gas industry, Port Harcourt.

The first objective involved a focused examination of the direct relationship between managerial competence and managerial effectiveness within the SME context. This inquiry

aimed to delineate the extent to which specific dimensions of managerial competence, such as problem solving, leadership, decision-making, etc., serve as predictors of managerial effectiveness. The investigation of this relationship enabled the study to contribute to a team-driven conceptualisation of managerial functionality and its influence on performance outcomes in resource-constrained organisational environments, such as SMEs. This objective links to several key benefits outlined earlier: (i) *Improved organisational efficiency and effectiveness*: Understanding how managerial competence directly influences effectiveness allows for better development of training programs that improve how businesses are run. (ii) *Increased SME survival and sustainability*: Identifying this relationship supports efforts to build strong leadership that can make sound decisions and ensure long-term success; and (iii) *Better utilisation of financial resources*: More effective managers are more likely to use government loans and investments efficiently, reducing wastage and increase returns on investment.

The second objective extended this inquiry by investigating the mediating role of team cohesion in the relationship between managerial competence and managerial effectiveness. Rather than treating team cohesion as an outcome variable only, the study conceptualised it as an internal dynamic mechanism that impact managerial influence in sustaining SMEs. This mediation analysis provided a directed understanding of how interpersonal and relational dynamics within teams interact with managerial input, and offered a deeper interpretation of the pathways through which competence translates into effectiveness in SMEs. It further enabled the identification of critical leverage points such as inclusion and diversity and collaboration and cooperation, for enhancing team-based performance and the development of team-cohesive managerial competencies. This objective supports the following benefits for SMEs sustainability: (i) *Stronger innovation and competitiveness*: Cohesive teams tend to collaborate better and innovate more effectively. This understanding show how team cohesion

mediates the impact of management skills, the study contributes to building more dynamic SMEs; (ii) *Greater organisational efficiency*: Teams that work well together, under capable management, improve workflow and performance. This directly strengthens business operations; and (iii) *Social and economic impact*: Team cohesion helps create stable and productive workplaces, which in turn leads to job creation.

The third objective examined the conditional effects of role ambiguity and role conflict on the relationship between team cohesion and managerial effectiveness. Through the examination of these moderating variables, the study providing understanding of how contextual and structural ambiguities within SME environments alter the strength or direction of the managerial effectiveness–team cohesion link. This objective was essential for capturing the situational contingencies under which managerial competence either promotes or fails to encourage cohesive team dynamics.

The moderating analysis allowed for a more focused interpretation of the interaction between individual capability and organisational context. Again, the third objective is linked to the following key benefits: (i) *Improved resilience against external and internal challenges*: By examining how role ambiguity and role conflicts affect team dynamics and management outcomes, this objective addresses internal organisational weaknesses that often lead to business failure; (ii) *Reduced business failure and waste*: Clarifying roles and reducing conflict helps create a more focused and productive team environment, preventing costly errors and mismanagement, and (iii) *Enhanced long-term SME growth*: Identifying barriers that weaken the relationship between management and team function allows targeted solutions that support sustainable growth.

The above 3 research objectives were achieved through: (1) The identification and operationalisation of the investigated latent variables; (2) Developing the survey instrument; (3) Conducting a pilot study to test the reliability of the survey instrument; (4) Based on the

outcome of the pilot study, the survey was conducted; and (5) A structural equation modelling (SEM) statistical approach was developed to test the hypotheses.

The outcome of the SEM and the evaluation of the findings suggested that objective 1 shows the presence of a significant direct positive relationship exists between managerial competence and managerial effectiveness. Also, the findings supported objective 2, of a strong significant positive mediating effect of team cohesion on the direct relationship between managerial competence and managerial effectiveness again, Again, as stated in objective 3, the investigation of the moderating effect of uncertainty management on team cohesion shows no significant effect.

Nature and Significance of the Study

In every research, there is a need for a research design which defines the plan or proposal to conduct research (Creswell, 2009). Three important elements are considered in research design, including: philosophical assumptions, strategies of inquiry, and specific research methods (Creswell, 2009). The choice of research design is based on considering the above three elements as well as the research problem, the personal experiences of the researcher, and the audience(s) for whom the research study was written. The increasing mortality rate of SMEs in Nigeria is due to lack of funding and managerial competence. Government is currently addressing funding, but managerial competence is still a problem (Chikwe & Biriowu, 2019; Josiah et al., 2016).

This study narrows down on attaining efficiency from the human resource aspect of the organisation by studying the influence of managerial competence on both managerial effectiveness and team cohesion, and the direct influence of team cohesion on managerial effectiveness. The mediating influence of team cohesion and the moderating effect of uncertainty management extended the scope and outcomes of the study for practical application. The outcome of this study has provided further insight on the high factor

dimension(s) of managerial competence and managerial effectiveness influencing team cohesion in SMEs. Therefore, this study adopts a descriptive quantitative research approach. This study adopts a positivist philosophical assumptions. This discussion that follows provides details of the participants, research method, data collection and analysis, and ethical consideration. And the significance of the study as follows.

Participants

The characteristics of the population is important in every research (Creswell, 2009). For this study, the population comprises of workers in SMEs in the oil and gas industry. However, the total population of the workers in the stated SMEs is difficult to retrieve because it is a confidential aspect of the business. To develop the SEM, 160-300 participants are adequate as suggested in the literature (Memon et al., 2020). Hence, the 221 participants' data retrieved during the survey was adequate for the SEM analysis. Though, the population is diverse in demographic characteristics, these were minimally included in the data analysis because the focus of the study is to investigate the relationships that are not directly linked to demographic characteristics such as age, sex, height, nationality, etc. All participants were recruited for this research in line with approved ethical procedures and standards of the Unicaf university. As a result, no participant was approached until all ethical approvals were received.

Methods

The research approach and process of inquiry are dependent on the research philosophy adopted (Saunders et al., 2019). The ontological perspective investigated is how managerial competence influence the performance of SMEs. A positivist epistemological philosophy was adopted. Positivism guides the study of causal relationships between variables (Creswell, 2009; Easterby-Smith et al., 2015). Thus, a quantitative research approach is adopted, based on the method of data analysis and purpose of theory, as espoused in the literature (Memon et al., 2023) and discussed further below.

Statistical analysis of data: This study adopts statistical structural equation modelling (SEM) in the analysis of the collected field data for cause-effect regression study, correlation between variables and path-analysis. First, cause-effect research, as applicable in this study, is conducted using a quantitative research approach which allow the analysis of large numerical data for the purpose of deductive conclusion and generalisability of findings to the study population (Easterby-Smith et al., 2015; Saunders et al., 2019). Second, correlation studies as also applicable in this research are achieved by adopting a quantitative research approach using statistical applications to examine the strength of the relationship between variables. Third, factor loadings enabled the discovering of underlying structures of the dimensions of each concept and high-loading dimensions that influence regression and correlation.

Purpose of Theory: This study develops theoretical framework and hypotheses from literature review. Unlike qualitative methods where the focus is the development of new theories, quantitative approach develops theoretical framework from existing theories and design hypotheses to test the theories with focus on the research phenomenon and construct (Saunders et al., 2019). Thus, the process of inquiry is predetermined, and the researcher is distant from the process, as applicable in this study.

Data Collection Tool

Data collection in quantitative research can be from experiments, structured observations, secondary data and survey (Saunders et al., 2019). This research is not experimental, because the variables are not manipulated to produce time-dependent longitudinal outcomes. Also, there are no structured observations in this study since the behaviour of participants are not observed under a defined workplace situation. Again, this study did not use secondary data because it investigates relationship between concepts in a unique construct based on the specific need of this study. However, the purpose of this study was achieved through the cross-sectional administration of closed-ended survey questionnaire

to a minimum of 211 workers in SMEs that are directly involved in the oil and gas industry in Port Harcourt, Nigeria. The rationale is to retrieve attitudinal responses from a large number of respondents based on a series of ordered scale-measurement questions suitable for the nature of statistical data analysis approach adopted for this study, because surveys are prominent in this kind of study (Easterby-Smith et al., 2015; Saunders et al., 2019). Sample size was estimated to eliminate both Type I and Type II errors. Type I error was eliminated by setting alpha level as 0.05, while Type II error was eliminated by setting the statistical power to 80%, which is ideal for exploratory studies (Cohen, 1988). The sample is determined by using a software (G*Power) as suggested in the literature (Faul et al., 2007; Hair et al., 2017).

Data Analysis

Data analysis was achieved through structural equation modelling (SEM) based on the positivist epistemological philosophy adopted in this study, and the need to identify high-loading dimensions that strongly define the causal and correlational relationship between the concepts of study. The SEM approach involves regression, correlation and path-analysis (Mertler & Reinhart, 2016). Regression and correlation results was used to test the hypotheses, while the correlation between the dimensions of one concept and another provided further insights on how the dimensions influence the research construct. Also, path analysis was conducted to provide insight into the strength and direction of the relationship among the variables in the research construct. In order to increase the significance of the predictions in the pilot study, a sample effect size of 0.15 was adopted, which is conservative in research studies (Cohen et al., 2003). The effect size was increased to 0.25, as suggested in the literature (Cohen, 1988), after the pilot study indicated that the Cronbach's alpha reliability check for the variables in the study was greater than 0.7.

Two approaches to SEM analysis include the covariance-based method (CBM) and partial least square (PLS). The SEM model adopted consists of reflective constructs of the

dimensions of managerial competence, managerial effectiveness, team cohesion (also as mediator) and the moderating effect of role ambiguity and role conflict. Hence, PLS-SEM has been adopted because it is most suitable for studies where the primary interest lies in identifying the strength and significance of individual variables within a complex model (Hair, 2021; Rigdon et al., 2017). It has been emphasised that PLS-SEM is ideal when the focus is on prediction, model complexity is high, or when the sample size is small (Hair et al., 2021), which fits into the context of this study. Detail explanation of the rationale for the adopted SEM approach was provided in Chapter 3.

Descriptive statistics were used to analyse the demographic and professional characteristics of participants in the Nigerian oil and gas sector. Data were collected via a Google Form, including informed consent, and covered variables such as age, gender, ethnicity, education level, industry experience, and time in current roles. Age was grouped into bands and analysed using percentages to identify trends and dominant age groups, then compared to national data to assess representativeness. Gender and nationality distributions were similarly examined to reflect workforce diversity and alignment with local content requirements. Education levels were categorised to evaluate qualifications and compare with national statistics, shedding light on workforce preparedness. Industry experience and job tenure were analysed to explore career progression and implications for training and development in SMEs.

Possible Biases in Sampling Method

Sources of sampling bias in research conducted using the quantitative method can be from the population, sampling design, estimating the sample size, and non-response/measurement error (Saunders et al., 2019; Sekaran & Bougie, 2016; Zikmund et al., 2009). These sources of bias are controlled in this study as discussed further below.

Bias in determining the population: The characteristics of the population are a critical aspect of any research study (Creswell, 2009). In this study, the target population consists of workers in SMEs within the oil and gas industry in Port Harcourt, Nigeria. However, obtaining the total number of employees in these SMEs is challenging due to the confidential nature of such business data. Despite this limitation, the software recommends a sample size of 211 participants for the development of the Structural Equation Model (SEM). While the population is diverse in terms of demographic variables such as age, gender, nationality, and so on, these characteristics are not included in the data collection or analysis. This is because the study focuses on investigating relationships that are not directly influenced by demographic factors. Consequently, the inability to access detailed population data is not expected to introduce significant bias or negatively impact the validity of the outcomes of the study.

Bias in the sampling design: In this study, a random sampling design of participants from six SMEs in the Nigerian oil and gas industry in Port Harcourt was employed, with participants accessed through their managers or supervisors, in line with the recommendations in the literature (Creswell, 2009). A potential source of bias in this approach is that managers might selectively grant access to employees who are more likely to respond favourably or sympathetically to managerial weaknesses reflected in the survey questions. It has been observed that gatekeepers may exert control over access and subtly influence who is included in the study, which can potentially skew the results (Hammersley & Atkinson, 2019). To mitigate this bias, the researcher collaborated directly with the HR team or the designated supervisor who acted as the gatekeeper. The online questionnaire link was then distributed directly to staff members who had at least one year of experience working in SMEs, to ensure a more independent and representative sample.

Bias in determining an appropriate sample size: The appropriateness of a sample size is influenced by the confidence interval and confidence level adopted in the study, as well as

the variability within the population (Easterby-Smith et al., 2015; Saunders et al., 2019). Bias may arise in determining the sample size if it fails to adequately represent the measure of interest (Saunders et al., 2019; Sekaran & Bougie, 2016). In this study, since the conceptual focus does not involve examining population characteristics, the variability of results is not expected to extend beyond that of the study sample of 211 participants. To further mitigate potential non-response bias (Zikmund et al., 2009), an additional 50 participants were included in the distribution making a total of 261 survey tool.

Bias in field sampling and measurement: Bias in field sampling can arise when the selected participants do not accurately represent the defined target population (Saunders et al., 2019). To mitigate this risk, the researcher proactively visited the SMEs of interest to verify their operational status before engaging with the business owners to request access to eligible participants. This approach helps ensure that the sample aligns with the intended population. Measurement bias, on the other hand, occurs when the instruments used do not adequately capture the constructs under investigation (Memon et al., 2023). In this study, such bias was minimised by designing the questionnaires based on well-established theories, thus enhancing the reliability and validity of the data collected.

Ethical Considerations

Ethics in research is the adoption of the right rules of conduct with the responsibility to protect participants from harm, respect their privacy, autonomy, dignity, and other rights. Ethical concerns are investigated when the research involve human or animal subjects, but is now applied to include other aspects of research involving the integrity and competence of researchers. The benefits of good research ethics has been advocated in the literature (Saunders et al., 2019), to include: (i) researchers are conscious of the codes that guides their research and they work within the ethical boundaries set by the regulating body; (ii) it enables researchers to consider other options of conducting the same study when faced with ethical

dilemmas, and this can improve the objectivity in the choice of the research approach (Cannella & Lincoln, 2018); and (iii) the rights of participants are protected throughout the study (George, 2016; Saunders et al., 2019). Therefore, the ‘codes of ethics’ of the Unicaf University Research Ethics Committee (UREC) was observed in this study with the intention(s) to fulfil the following ethical principles including beneficence, non-maleficence, respect for participants rights, and justice.

Beneficence: Beneficence comprises of two elements that: (i) ensures participants are not harmed in anyway during the research; and (ii) maximising the benefits of the research and minimising the harm (Bordens & Abbott, 2018). In other words, beneficence advocates that the well-being of the participants must be always protected. Consequently, any form of emotional or psychological trauma on the participants must be avoided. If the interview must include questions that are emotionally sensitive, the researcher must provide a list of available places to seek counselling resources. This study ensured the well-being of participants. Emphasis was placed on designing research studies with low risk by thoroughly assessing available data collection options. Therefore, this study is considered minimal/low risk because participant activities do not pose risks greater than those encountered in their daily routines. When dealing with information concerning vulnerable populations, such as individuals with disabilities or learning difficulties, researchers may opt to interview spokespersons or expert informants instead. However, this study did not recruit individuals with disabilities.

Non-maleficence: Harm of any form to participants must be avoided. As an associated risk, harm has the potential to negatively impact on emotional and psychological well-being, physical or mental health, or the ability for social or group belongingness (Saunders et al., 2019). Hence, a suitable research method must be adopted to ensure non-maleficence. Since harm can also come from not ensuring anonymity, it is best to have research done with non-disclosure of a participant’s identity especially in qualitative research. However, even in

computer-aided data collection, the IP address of the participants computer can be identified. Hence, there is a need to always ensure anonymity. It has the potential of improving participants willingness to participate in the research (Easterby-Smith et al., 2015; Surmiak, 2018). The need to maintain anonymity and avoid questions that could potentially increase emotional or psychological trauma for participants was ensured throughout the study. Participants were informed about data handling procedures and how data was securely disposed of. All raw data has been submitted to the University, and also stored in the researcher's personal computer.

Respect for the rights of participants: The rights of the participants include informed consent, right to participate and withdraw during the study (even when at the period of reporting), no form of coercion or pressure to provide information, and the rights to their privacy (Saunders et al., 2019). Therefore, it is social responsibility on the researcher to respect the rights of their participants. The rights of participants varies depending on the specific need attributed to the problem statement from one study to the other. Hence, with a good risk analysis and review by ethics committee, these rights are identified and respected. For this study, all activities conducted during the study received ethical approval from UREC to ensure the protection of the rights and welfare of all human participants, irrespective of whether such review is deemed necessary for the study. All research endeavours adhered to a process of online informed consent, with the primary goal of documenting the specific ethical dimension of the process. Parental consent is mandatory for studies involving children prior to commencement. All participants recruited for this study were able to provide self-consent. Participants were informed about data handling procedures and how data was securely disposed of.

Justice: Justice ensures that there is equal weighting of the burdens and benefits of the research between the researcher and the participants (Bordens & Abbott, 2018). Implying that

the participants have access to justice when their rights have been violated (Cannella & Lincoln, 2018). To address this, the need for confidentiality and anonymity have been discussed extensively in the literature (Surmiak, 2018). If anonymity is not possible, there must be a signed agreement (without coercion) by the participant (Saunders et al., 2019). When dealing with information concerning vulnerable populations, such as individuals with disabilities or learning difficulties, researchers may opt to interview spokespersons or expert informants instead. However, this study did not recruit individuals with disabilities. This study did not involve prisoners; hence there was no need for further security scrutiny.

Significance of the Study

The strength of this research relies on existing theories of organisational performance, managerial competence, managerial effectiveness, team cohesion and uncertainty management, and measurable characteristics of these concepts available in the literature. Another strength is the availability of statistical tools that can process large data and investigate the internal validity of the survey instrument. Again, the experience of the researcher, her academic qualifications and availability of qualified lecturers of the UNICAF university are also strengths that enabled the timely completion of this research. However, an anticipated weakness is achieving 100% return of the survey instrument and accessing the participants. Moreover, it is my expectation that the strengths identified above should be able to enable the researcher to overcome these weaknesses. This PhD research is significant because of the following justification.

Most SMEs do not survive beyond five years. The literature identifies two main problems responsible for the early failure of most SMEs: managerial incompetence and lack of funding. Whereas the government is providing low interest loans through the CBN policy, there are no policies to regulate the competence of SMEs owners/managers that is linked to their ability to access funds. To isolate the issue of funding, the study was conducted in the oil and

gas industry, where SMEs are adequately paid after completing the contract scope. The research investigated the dimensions of four variables—managerial competence, team cohesion, managerial effectiveness, and uncertainty management. The ranking of the dimensions of managerial competence revealed critical factors that can enhance both team cohesion and managerial effectiveness. This study has created a framework for exploring the relationship between team cohesion and related managerial competencies to enhance productivity. Therefore, this research has provided further knowledge that can aid the development of the policy that links the competence of SME owners/managers to their ability to access funds from the government or financial institutions.

A breakdown of the significance of this study is provided as follows: (1) *Government*: The study offers policymakers evidence-based insights into the managerial competencies required to enhance SME survival, which is vital for economic growth and job creation. (2) *Banks and Financial Institutions*: By identifying critical managerial competencies that enhance team cohesion and managerial effectiveness, the study equips lenders with a tool to assess SME owners/managers. (3) *SME Owners/Managers*: The study offers actionable insights into the specific managerial competencies that drive team cohesion, enabling SME owners to prioritise the development of required skills.

The key innovations include: (1) *Integrated Competency Framework*: The comprehensive model connects managerial competencies with team cohesion and effectiveness, offering a new understanding of how these concepts interact in an SME setting. (2) *Contextualization to the Oil and Gas SME Sector*: This contextual focus represents a significant innovation because most competency frameworks are generalized or designed for large corporations, limiting their practical relevance. (3) *Evidence-Based Prioritization of Managerial Competencies*: This prioritization enables SMEs to strategically target critical skill areas, providing a practical roadmap for managerial development and capacity building. Unlike

conventional frameworks that list competencies descriptively, this study delivers an action-oriented, evidence-backed tool for performance improvement.

Research Questions and Research Hypotheses

Research Questions

The research questions (RQ) presented below are formulated from the research framework comprising four key concepts: Managerial Competence, Managerial Effectiveness, Team Cohesion, and Uncertainty Management. This study provided answer to the following questions:

RQ1: What are the Managerial Competencies influencing Managerial Effectiveness in SMEs in the Nigerian oil and gas industry in Port Harcourt from the perspective of Team Cohesion?

RQ2: How does the mediating influence of Team Cohesion affect the relationship between Managerial competencies and Managerial Effectiveness in the Nigerian oil and gas industry in Port Harcourt ?

RQ3: How does the moderating role of Role Ambiguity and Role Conflict influence the direct relationship between Team Cohesion and Managerial Effectiveness in the Nigerian oil and gas industry in Port Harcourt ?

These three fundamental research questions are intricately linked to the hypotheses formulated for this research, as outlined below.

Research Hypotheses

Research evidence suggests that performance, efficiency and effectiveness are mutually dependent in every organisation (Jones & George, 2016). Efficiency is dependent on the ability of managers to use resources productively, while effectiveness is determined by how managers define and achieve the organisational goals (Daft, 2012; Jones & George, 2016). Therefore, the

theoretical framework developed for this study is a construct of three latent variables that can influence organisational performance, including managerial competence, managerial effectiveness, and team cohesion.

Therefore, this study was investigated based on the following theoretical position: (1) The theory of action and job performance which suggests that organisational effectiveness and efficiency is enhanced by the competence of the manager (Boyatzis, 2008); (2) Team cohesion, which indicates that the productivity of the workforce is related to the task and social cohesion among team members (Salas et al., 2015). Social cohesion is possible through social identity (Forsyth, 2010; Hirst et al., 2009; Trepte & Loy, 2017) and it is explained from the viewpoint of social cognitive theory (Bandura, 1986); (3) Managerial competence (MC) and Managerial effectiveness (ME) are related to self-efficacy theory (Bandura, 1997), which implies that organisational performance is influenced by managerial competence and managerial effectiveness (Analoui et al., 2010; Chikwe & Biriowu, 2019; Fonceca et al., 2017). Empirical results suggest that there is a positive relationship between the performance of managers and their feeling of self-efficacy after undergoing a coaching session to enhance their capacity to be more effective (Baron & Morin, 2010); and (4) Uncertainty management (Brashers, 2001; Wu et al., 2019), especially on how role ambiguity moderates the performance of employees in SMEs. The associated hypotheses were expressed as follows.

Linking managerial competence to managerial effectiveness: Previous studies suggests that organisational performance is positively and significantly related to managerial competence and effectiveness (e.g., Analoui et al., 2010; Chikwe & Biriowu, 2019; Fonceca et al., 2017). Managerial effectiveness is related to how the actions of managers enables organisations to achieve their goals (Fonceca et al., 2017). Managerial roles of planning, organising, leading and controlling are related to the efficient administration of resources (Jones & George, 2016; Koontz, 1961; Parker & Ritson, 2005).

The theories of management highlights the need for managers to improve their effectiveness: Fredrick Taylor suggests comparative remuneration based on productivity among the workforce to improve task efficiency (Jones & George, 2016); Henri Fayol advocates for the training of managers to enhance organisational productivity (Breeze, 1995); Max Weber emphasises that the competence of managers should define the organisational hierarchy and structure (Daft, 2012); and the Hawthorn experiment by George Elton Mayo suggests a human relations approach to management (Koontz, 1961). Also, there is ample evidence suggesting that managerial competence and effectiveness are linked to organisational productivity (Fonceca et al., 2017; Pickett, 1998; Zhu et al., 2013). Therefore, the first hypothesis (H1) is stated as follows:

H_{1a}: Managerial competence positively and significantly influence managerial effectiveness.

Linking managerial competence to team cohesion: Previous studies indicates that team performance in organisations is significantly and positively linked to the task and social cohesion within the team (Salas et al., 2015), and managers' competence (Chikwe & Biriowu, 2019; Rego et al., 2016). Also, Henry Fayol's theory of management encourages group task through the right managerial competence (Chartered Management Institute, 2002; Parker & Ritson, 2005). Other studies in the literature suggests that efficient teams are necessary for organisational productivity (Al-Rawi, 2008; Glassop, 2002), and depends on the characteristics of the work environment (Pranitasari, 2019; Yusuf & Metiboba, 2018).

Again, teamwork is one of the high-rating dimensions of managerial competence that enhances innovation in SMEs (Chikwe & Biriowu, 2019). Similarly, available evidence in the literature suggests that the level of task cohesion (TC) and social cohesion (SC) among the workforce influences teamwork (Salas et al., 2015). Accordingly, the second and third hypotheses (H2 & H3) are stated as follows:

H_{2a}: Managerial competence positively and significantly influence task cohesion.

H_{3a}: Managerial competence positively and significantly influence social cohesion.

Linking team cohesion to managerial effectiveness: Team cohesion assumes a mediating role when linked to managerial effectiveness in the research construct. Hence, this study investigates the proposition that the relationship between managerial competence and managerial effectiveness in SMEs can be clarified by task and social cohesion among the workforce. Therefore, the success of the organisation lies in the relationship between the manager and the work team. Edwards (2005) suggests that innovation and effective knowledge sharing within the workforce can be enhanced if the manager encourages team cohesion, and can be achieved through the creation of social interactive platforms for knowledge sharing in the workplace (Dasgupta & Gupta, 2009; Klepić & Madžar, 2017). In another study, innovation in the workplace is positively dependent on the behaviour of the leader (Colbert et al., 2012). Also, it is evident from the literature that teamwork can positively impact managerial effectiveness (Pranitasari, 2019). Thus, the related hypotheses (H4, H5, H6 & H7) are stated as follows:

H_{4a}: Managerial effectiveness is positively and significantly influenced by task cohesion.

H_{5a}: Managerial effectiveness is positively and significantly influenced by social cohesion.

H_{6a}: There is a significant positive mediating effect of task cohesion on the direct relationship between managerial competence and managerial effectiveness.

H_{7a}: There is a significant positive mediating effect of social cohesion on the direct relationship between managerial competence and managerial effectiveness.

The moderating effect of role ambiguity and role conflict on the relationship between team cohesion and managerial effectiveness: Empirical evidence suggest that role ambiguity is negatively related to the innovation within the team (Maden-Eyiusta, 2021). The presence of role ambiguity in SMEs can be inferred from the nature of work engagements in SMEs (Agwu & Emeti, 2014), where the workers are not employed with clearly defined roles and responsibilities. Elsewhere, role ambiguity was also related to employees' burnout and the feeling of abusive supervision (Wu et al., 2019). Role ambiguity is rooted in uncertainty management theory, especially on how role ambiguity can influence the performance of the

team and the objectivity of performance appraisals (Brashers, 2001). Therefore, it is important to investigate if role ambiguity and role conflict can influence the positive relationship between team cohesion and managerial effectiveness and defined in hypotheses H8, H9, H10 and H11 below.

H_{8a}: There is a positive moderating effect of role ambiguity on the relationship between SC and ME.

H_{9a}: There is a positive moderating effect of role ambiguity on the relationship between TC and ME.

H_{10a}: There is a positive moderating effect of role conflict on the relationship between SC and ME.

H_{11a}: There is a positive moderating effect of role conflict on the relationship between TC and ME.

Details of each construct have been provided during the literature review in chapter 2. The remaining sections of the thesis are organised to provide a clear and coherent flow from the theoretical foundations to the practical outcomes of the research.

Chapter Two presents the literature review, beginning with the theoretical and conceptual framework, highlighting the significance of research theory, and identifying the research gap. This is followed by a detailed explanation of the research constructs and a description of the industry context in which the study is situated. The chapter concludes with a summary of key points drawn from the literature.

Chapter Three outlines the research methodology, including the research approach and design, the population and sample, and the process of estimating sample size. It also describes the research instruments used, defines the operational variables—namely managerial competence, managerial effectiveness, team cohesion, and uncertainty management—and outlines the study procedures and ethical assurances. The chapter ends with a discussion on

data collection and analysis, including both descriptive statistics and the methods used to explore relationships between theoretical and measured constructs.

Chapter Four presents the research findings, beginning with the results of the pilot study and reliability testing of the instrument. It then details the structural equation modelling (SEM) process, including reliability, convergent validity, and discriminant validity tests, followed by the results of hypothesis testing. The chapter also includes an evaluation of the theoretical model and a discussion of the ranked dimensions of key variables.

Chapter Five concludes the thesis by discussing the implications of the findings in relation to the research questions, offering practical recommendations, and proposing a framework for application. The chapter also provides suggestions for future research and presents the final conclusions of the study.

CHAPTER 2: LITERATURE

This chapter focuses on establishing a foundational understanding of the Nigerian Oil and Gas Industry, with particular emphasis on the key concepts of this study: managerial competence, managerial effectiveness, and team cohesion. It explored the significance of the study within the context of small and medium enterprises (SMEs) in the industry and underscores the role of the literature review in supporting the research objectives. The research questions and objectives outlined in Chapter One provide guidance for the exploration of these concepts.

A theoretical framework is proposed that integrates managerial competence, managerial effectiveness, team cohesion, and uncertainty management within SMEs in the Nigerian Oil and Gas Industry. Relevant theories, models, and frameworks have been adopted to further explore the interrelationships within the theoretical framework. Additionally, the chapter discusses how the framework guided the empirical investigation and the interpretation of the data retrieved in the study.

The industry description discusses the relevance of the research within the Nigerian Oil and Gas Industry and highlights the potential applications, impact, and significance of the investigation in addressing real-world challenges faced by SMEs in the industry. The identified variables for each concept were aligned with the constructs in the theoretical/conceptual framework.

The first concept, “Managerial Competence in SMEs,” defines managerial competence and its components, reviews theoretical frameworks and models within the context of SMEs, and explored empirical studies to examine the relationship between managerial competence and team-related performance in SMEs. Measures of managerial competence have been operationalised to enhance the research.

The second concept, “Managerial Effectiveness,” addresses the unique challenges faced by SMEs in the Nigerian Oil and Gas Industry, particularly in relation to team cohesion and the measurable variables needed to enhance effectiveness. The discussion reviews theoretical perspectives and frameworks, and examines empirical studies relevant to the purpose of the study. The identification of unique perspectives in the literature led to the operationalisation of the measures for managerial effectiveness.

The third concept, “Team Cohesion in SMEs,” explores team cohesion, discussing its significance and the factors that influence it in SMEs. It further reviews relevant theoretical models and examines empirical studies to enhance the selection of measured variables. The operationalisation of measures for team cohesion is also addressed.

Furthermore, the chapter discussed the moderating effect of role ambiguity and role conflict, and highlighted potential moderating factors. It explored the function of role ambiguity and role conflict in the relationship between team cohesion and managerial effectiveness. Theoretical arguments and empirical evidence regarding how these factors moderate the relationship are presented, and measures of role ambiguity and role conflict were operationalised.

The chapter concludes with a comprehensive summary of key findings from the literature review, and emphasised the identified research gaps and limitations. The significance of the PhD thesis in addressing these gaps was underscored through detailed operationalisation of the measurable variables of each concept. The literature search strategy was based on the theoretical framework. Key search terms that were included in the review: managerial competence AND SMEs; managerial effectiveness AND SMEs; team cohesion AND SMEs; managerial competence AND managerial effectiveness; managerial competence AND team cohesion; and team cohesion AND uncertainty management.

This review began with the definition of each concept and its relationship to SMEs. This was followed by the identification of related theories. Furthermore, the relevant dimensions of each concept were then examined, with a focus on how these dimensions relate to team cohesion. Finally, the dimensions of each concept were operationalised. The literature review was structured thematically rather than chronologically. Each section begins with defining the core concept, followed by the relevant theories, key dimensions, and their operationalization. This structure enhances conceptual clarity and ensures that the review directly supports the development of the study's theoretical framework and variables. This approach is consistent with the position in the literature (Pagliarussi, 2020) which emphasizes organizing literature reviews thematically to synthesize prior studies into coherent conceptual categories.

Theoretical/Conceptual Framework

This section begins by introducing the theoretical framework chosen as the foundation for this doctoral research. Additionally, it provides a detailed description of the specific industry to which the current study is applied. Subsequently, the section presents a concise discussion on the significance of theory in research up to this point. Following that, this study conducted a thorough analysis of the theories that have been adopted for this study, while also providing an in-depth portrayal of the industry under examination.

The Significance of Research Theory

The significance of theory in research cannot be overstated. Theoretical frameworks provide the conceptual groundwork upon which studies are built, allowing researchers to organise and interpret their findings within a coherent framework. Theory serves as a lens through which researchers can understand and explain phenomena, guiding their inquiry and shaping their hypotheses. It provides a roadmap for research, offering a systematic approach

to investigating and understanding complex phenomena. Moreover, theory enables researchers to make predictions, test hypotheses, and generate new knowledge. The use of theory in research enable scholars to contribute to the advancement of knowledge within their field and build upon existing theoretical foundations. Most importantly, the importance of theory lies in its ability to provide a solid foundation for research, enhances details and thoroughness, and contributes to the overall body of knowledge in the field of study (Easterby-Smith et al., 2015).

Every research endeavour starts with an idea, typically arising from a recognised void in the existing body of literature within a specific subject area. The ultimate objective is to offer solutions to intricate challenges faced by both the business world and society at large (Bordens & Abbott, 2018; Creswell, 2009). Thus, once the research idea is established, it becomes necessary to persuade the research community about the credibility of the chosen research approach in addressing the problem. This emphasises the significance of adopting a dependable and comprehensive theoretical framework, as it directly impacts the research methodology as well. Again, the purpose of developing and validating a theory related to a socially or economically significant phenomenon is to address a problem, clarify the distinctive characteristics of the phenomenon, and establish a framework for understanding the cause-and-effect relationships among the concepts that define the phenomenon (Udo-akang, 2012).

Theoretical Framework and Research Gap

In accordance with the literature (Daft, 2012, p. 7) “an organisation is a social entity that is goal directed and deliberately structured.” This definition implies that organisations facilitate human interaction, task completion, and the existence of managerial roles. Consequently, small and medium-sized enterprises (SMEs), as organisations, bring together knowledge, individuals, and raw materials to accomplish tasks that would be impossible for any single person to undertake alone. The sustainability of SMEs can be explained using the concept of organisational performance. This concept examines the ability of managers to

efficiently and effectively utilise resources, both human and capital, to satisfy customers and achieve the objectives of the organisation (Daft, 2012; Jones & George, 2016). Accordingly, organisational performance improves as efficiency and effectiveness improve in direct proportion. Efficiency refers to the productive utilisation of resources, while effectiveness measures the appropriateness of goals pursued by managers (Jones & George, 2016).

Managerial competence, therefore, is closely tied to the ability to take action and exhibit the necessary behaviours for optimal performance (Boyatzis, 1982, 2008). The dimensions of managerial competence—*influence*, *people management*, and *teamwork*—are critical to organisational effectiveness and long-term success (Torrington et al., 2005). Through “*Influence*,” managers are able to guide the behaviour of the workforce, provide direction for decision making, and drive the alignment and adaptiveness of the team without depending solely on the defined hierarchical authority within the organisation. Thus, “*Influence*” creates an adaptive and proactive work environment and culture.

Also, through “*People management*,” the manager provides the needed direction for recruitment, employee training and development, motivation, and retention, and ensures that the organisations maintained a competent, capable and engaged workforce. Previous empirical study suggests that effective people management is linked to higher employee job performance and satisfaction (Purcell et al., 2003). Again, job performance has been linked to job satisfaction in the workplace (Gazi et al., 2024), and improving employee engagement (Yang et al., 2024). Implying that a manager with the right people-oriented competence can enhance team performance. This suggests that a manager's interpersonal and leadership skills directly affect team motivation and productivity. In small enterprises, teams are lean and relationships are supportive, and able to promote a team-driven workplace.

Thus, the competence of SME managers must extend beyond technical or operational tasks. They must cultivate both strategic acumen and people-oriented skills to drive

performance through collaboration. A team-driven approach, anchored in clear planning and strong interpersonal leadership, enhances cohesion, encourages accountability, and ultimately leads to more resilient enterprises. Investing in the development of these competencies is not a good-to-have as it is vital for unlocking the full potential of the workforce and achieving sustainable business outcomes.

Furthermore, people-oriented competence promotes teamwork, synergy, communication, and cooperation within and across operational departments, and these are essential for sustaining innovation and operational efficiency. As argued in the literature (Katzenbach & Smith, 1993; Zajac et al., 2021), teams with strong collaboration and mutual accountability consistently outperform individuals and poorly coordinated groups. Collectively, these competencies form the foundation of managerial effectiveness and are directly correlated with improved organisational outcomes, including productivity, employee engagement, and adaptable work culture.

It is important that these people-oriented competencies should align with the individual, the organisational environment, and the job requirements (Boyatzis, 2008). In this study, leadership, team management, and teamwork are important dimensions of managerial competence in line with the adopted definition found in the literature (Sangka et al., 2019). The four concepts studied in this doctoral work have not been combined in a single construct in previous studies. The emphasis in this study is on enhancing team bonding. Thus, the weights/loadings of the measured variables and their inter-correlations were used to provide insights into the ranking order of the measured dimensions of managerial competence and how these relate with other dimensions of the studied concepts.

Thus, the theories of action and job performance (Boyatzis, 2008), self-efficacy (Bandura, 1997), social comparison theory (Festinger, 1954), and uncertainty management

(Brashers, 2001; Maden-Eyiusta, 2021; Wu et al., 2019), are all interconnected with the concept of organisational performance as discussed further hereafter.

Theoretical Framework on Managerial Competence

In simple terms, “a competency is defined as a capability or ability” (Boyatzis, 2008). Competency involves having the fundamental “intent” that exists in the desired behaviour required to excel in a specific job role. Empirical investigation in the literature (Agwu & Emeti, 2014), suggests that lack of appropriate management experience and competencies are responsible for failures of SMEs. The drive for managerial competence is linked to the desired behaviour to achieve the goal (Boyatzis, 2008). Again, strategy drives business, and is influenced by efficient administration of resources which rests with the manager (Zacca & Dayan, 2018). For SMEs, capability defines both managerial and technical know-how that is explored for competitive advantage. The structuring and coordination of organisational resources is done by the manager to achieve the goals of the organisation (Daft, 2008). As stated earlier, the link between performance and effectiveness drive organisational outcomes. Effectiveness is driven by clear and focused organisational goals with the right strategies to achieving the goals (Daft, 2008). In setting the organisational goals for improved effectiveness, managers adopt stakeholder management competencies to balance the needs and interests of different groups involved including employees, customers, investors, and the government. Organisations are comprised of both structural and contextual dimensions.

Typically, SMEs operate with an informal manager-employee relationship and rely heavily on labour-intensive practices (Agwu & Emeti, 2014). Consequently, the success of such organisations is dependent on competent managers skilled in team management (Milošević et al., 2019). The effectiveness of managers in handling a labour-intensive workforce is closely linked to their ability to manage and lead effectively (Diskiene et al., 2018). Studies have demonstrated a significant correlation between task cohesion, social

interaction, and the accomplishment of team tasks, all of which impact organisational performance (Salas et al., 2015). Navigating today's organisations is a multifaceted task, and managers encounter numerous challenges from their internal operations and the external business environment. The complex nature of managing modern organisations, along with the diverse challenges from internal dynamics and external factors, demands competent managers who can effectively adapt, strategise, and make informed decisions to ensure the success and sustainability of their organisations. Competent managers promote active conducive work environment, encourage collaboration, and inspire their teams to overcome obstacles together. This ultimately strengthens team cohesion and enhances overall organisational productivity and success.

Small and medium-scale enterprises face unique challenges in managing their operations and dealing with the external business environment. SMEs, just like larger organisations, operate in a multifaceted business environment. They encounter challenges arising from their internal operations (e.g., resource management, team dynamics) and external factors (e.g., market competition, regulatory changes). To thrive in such a complex environment, SME managers need to be equipped with the necessary skills to navigate these challenges effectively. Thus, the success and sustainability of an SME largely depend on the capabilities of its managers. Competent managers possess skills in adaptability, strategic thinking, and informed decision-making, which are vital in addressing the diverse challenges faced by the organisation.

Managerial competence (MC) is strongly connected to the capability to act decisively and demonstrate the essential behaviours needed for achieving high performance (Boyatzis, 1982, 2008). The components of MC include influence, people management, and teamwork (Torrington et al., 2005). These skills should be in harmony with an individual's traits, the organisational context, and the demands of the job (Boyatzis, 2008). Previous study suggests

that MC is directly linked to business strategy and adaptability to change, with direct impact on performance (Zacca & Dayan, 2018).

Managerial capabilities are linked to the abilities of the management to improve and align available resources to the required competencies (Ali et al., 2019). Hence, skilled managers should possess the necessary capabilities to lead and make informed decisions, ultimately driving positive outcomes within the organisation. These capabilities have been defined to encompass the adopted management behaviour, decision-making approach, and focus on people development (Ali et al., 2017, 2019). For small and medium-sized enterprises (SMEs), adopting the action and job performance theory can have positive implications for enhanced sustainability. Competent managers can enhance their organisational effectiveness and efficiency, leading to improved performance, growth, and competitive advantage.

The action and job performance theory proposed in Boyatzis (1982), specifically link performance to the competencies of the manager that leads to action. Accordingly Boyatzis (1982) expresses that competency encompasses a collection of knowledge, attitudes, skills, and abilities that enable individuals to excel in specific tasks or roles. Boyatzis further suggests that competency plays a pivotal role in achieving excellence in any given task. That, it represents an inherent quality or attribute of an employee that is causally linked to consistent and effective behaviours, ultimately resulting in successful task performance. Thus, competency plays a vital role in the performance of managers in SMEs by enabling them to make sound decisions, optimise resources, adapt to change, lead effectively, solve problems, and manage relationships. It contributes to the overall efficiency, competitiveness, and growth of the SME in a dynamic business landscape.

Also, self-efficacy theory by Bandura (1997) is another sub-theory of organisational performance in relation to managerial competence (MC) and managerial effectiveness (ME). The self-efficacy theory suggests that managerial competence and effectiveness play a

significant role in organisational performance, as supported by other studies in the literature (Analoui et al., 2010; Chikwe & Biriowu, 2019; Fonceca et al., 2017). Furthermore, empirical evidence indicates a positive relationship between the performance of a manager and their self-efficacy, particularly after participating in coaching sessions aimed at enhancing their effectiveness (Baron & Morin, 2010).

For SME owners, the implication revolves around the need to develop the managerial competencies and enhance the effectiveness that are important for organisational performance. Therefore, SME owners should prioritise improving their managerial skills and seek opportunities for coaching to enhance their effectiveness.

Dimensions of Managerial Competence

From the above, the following dimensions of managerial competence are significant to the survival of SMEs:

Efficient Decision-Making: According to Daft (2012, p. 214), “decision making is the process of identifying problems and opportunities and then resolving them.” Managers are seen as decision makers (Daft, 2012). The right competency enables managers to possess the necessary knowledge and skills to make informed decisions (Fotouhi & Khojasteh, 2021). Managers can analyse situations, assess risks, and identify effective strategies, leading to better decision-making for the growth and success of the SME (García-Pérez et al., 2013). Effective decision-making is an important element of managerial competence, as the choices made dictate how the organisation addresses its challenges, allocate resources, and achieves its objectives (Ali et al., 2017; Daft, 2008, 2012; Daft & Marcic, 2017).

Enhancing the survival of small and medium-sized enterprises (SMEs) fundamentally depends on the development of managerial decision-making competence. Given the resource limitations and volatile market conditions that SMEs frequently encounter, the ability to make timely and effective decisions constitutes a vital competitive advantage. Improving decision-

making capabilities facilitates more efficient resource allocation, greater adaptability to environmental changes, and a stronger capacity to capitalise on emerging opportunities, all of which contribute significantly to organisational resilience. This perspective aligns with the view of Ali et al. (2017) and Daft (2008, 2012), who underscore that effective decision-making is a critical element of managerial competence, dictating how organisations address challenges and achieve objectives. Therefore, targeted training and development initiatives aimed at enhancing managerial competence are essential for cultivating effective leadership and driving superior organisational performance, as argued by Daft and Marcic (2017). Ultimately, empowering managers as proficient decision makers is central to ensuring the survival and sustained success of SMEs, thereby warranting focused attention from entrepreneurs, policymakers, and support organisations alike.

For SMEs, affective decisions by owners are determined by the richness of the available information (Fotouhi & Khojasteh, 2021). In essence, effective decision-making plays a key role in shaping the direction of SMEs. With the right skills and information, managers can respond to challenges, make sound choices, and guide their businesses toward success. Good decisions ensure proper allocation of resources and support the long-term goals of the business. It has been suggested that decision making is faster in SMEs because the owner also deputises as the manager (Pilar et al., 2018).

Resource Optimisation: Most SMEs in the Nigerian oil and gas industry are into project activities – as either suppliers of personnel and project consumables, or involved in construction activities. Hence, resource optimisation is critical to their success as it can enhance effective planning and scheduling of project activities (Allu et al., 2024). There are four management functions of a manager, including planning, organising, leading, and controlling (POLC), that have been considered the most fundamental to organisational success (Daft, 2012). The POLC framework has also been linked to decision-making, resources allocation

and problem solving (Atanda et al., 2025). Resource optimisation is a critical aspect of effective planning. While planning outlines the overall managerial strategy and actions required to achieve the organisational goals, resource optimisation ensures that the available resources are allocated appropriately to execute the business plan efficiently.

Based on demand and supply uncertainties, the literature (Santos et al., 2013) suggests the need to optimise the matching of planned jobs and roles with the skills and competencies of workers. However, resource planning is usually informal for small organisations (Daft, 2012). To address these challenges of uncertain demand and supply needs, it is important for SMEs to optimise the allocation of resources, especially their workforce. Kottika et al. (2020) emphasised that reduction in operational cost was one of the factors that sustained the performance of SMEs in Greece. A critical aspect of resource optimisation involves aligning job roles with the skills and competencies of employees.

However, due to the informal nature of resource planning in many small organisations, effectively addressing demand and supply uncertainties can become more difficult. Planning without resource optimisation can lead to inefficiencies, delays, and increased costs. Competent managers understand how to optimise limited resources, such as finances, personnel, and equipment, to maximise productivity and achieve organisational goals.

Adaptability and Flexibility: This aspect of a manager's competence is concerned with sustaining the customer's trust in the midst of the dynamic interplay between demand and supply. Thus, an empirical study has linked operational capabilities of SMEs to adaptability (Ali et al., 2019). This enables the organisation to respond to the changing business environment with the required behavioural response (Daft, 2012). However, the lack of competent workforce has been blamed as one of the hindrances of flexibility in SMEs (Brozović et al., 2023). SMEs often face challenges related to uncertain demand and supply conditions as discussed above, but they are seen as more adaptable to these challenges than

larger organisations (Bouzari et al., 2023). Competent managers are equipped with the ability to adapt quickly to changing circumstances, embrace innovation, and respond to market trends. Their agility helps SMEs stay competitive and seize opportunities in a fast-paced business landscape. Also, workforce adaptability is an essential human capital capability to enhance performance (Daft, 2012). Adaptability and flexibility is one of the dimensions of organisation culture (Denison et al., 2003). In SMEs, these traits enable managers to navigate the ever-changing business conditions, sustain customer trust, and enhance organisational performance. However, limited workforce competence can hinder flexibility, and affect responsiveness to environmental and operational changes.

Effective Leadership: The ability to lead is one of the POLC skills demanded of a manager. Competency empowers managers to lead by example, inspiring and motivating their teams to perform at their best. Thus, the dynamic relationship between leaders and followers impacts both job satisfaction and productivity (Graen & Uhl-Bien, 1995). The link between how employees view their leaders and their own job satisfaction is mainly influenced by how satisfied they are with their job in the first place (Kauppila, 2025). This suggests that when employees are happy in their roles, they tend to see their leaders in a more favourable light. Also, the outcome of the study by Kauppila (2025) reinforces the importance of job satisfaction in shaping overall workplace perceptions and relationship management. It further puts the spotlight on improving job satisfaction as a way to strengthen leader-employee nexus.

Different leadership styles exist in literature, and managers must adopt the right leadership behaviour to enhance the right followership (Northouse, 2016, 2019). Democratic and laissez-faire leadership styles can boost employee performance (Bilola, 2023). A democratic approach, where employees are involved in decision-making process, can enable employees to learn and grow through job cooperation and collaboration. Meanwhile, a laissez-faire style, which gives employees more freedom, can support personal development and self-

motivation. In contrast, an autocratic style, where the boss makes all the decisions without input from employees and subordinates, can halt growth and performance by creating frustration-laden workplace and limiting employee engagement (Bilola, 2023). From the perspective of decision making, a study of bank workers shows a low positive correlation between participative leadership and performance (Kehinde, 2024), which suggests a laissez-faire leadership style where employees are self-deterministic towards self-motivation and performance.

Transformational and transactional leadership styles have also been studied in SMEs. The main difference between transformational and transactional leadership styles lies in their approach to job motivation and followers' guidance. Transformational leadership is centred around inspiring and empowering individuals through a shared vision, promoting innovation, personal growth, and long-term change (Deluga, 1990; Rowold & Schlotz, 2009; Tims et al., 2011). Transformational leaders focus on building strong relationships, encouraging creativity, and aligning the team with the common goal (Northouse, 2019). In contrast, transactional leadership is more structured and focuses on maintaining order, efficiency, and short-term goals through management by objective (MBO). It relies on a system of rewards and punishments to manage performance, with leaders emphasising clear roles, expectations, and outcomes (Northouse, 2019). While transformational leaders seek to elevate and transform their teams, transactional leaders concentrate on managing tasks. However, in another study, transformational leadership behaviour has been linked to positive employee behaviour and outcomes in SMEs (Qalati et al., 2022; Feranita et al., 2020), while transactional leadership has been linked to low positive and insignificant relationship with innovation and job performance (Feranita et al., 2020).

Thus, the adoption of a leadership approach can influence the performance of SMEs. Consequently, the manager is expected to possess the skills to communicate effectively,

delegate tasks, provide constructive feedback, and promote a positive work environment. Strong leadership from competent managers boosts employee morale, engagement, and productivity. Thus, leadership was ranked highest in an empirical study of managerial competencies in the literature (Sangka et al., 2019).

Problem Solving: Innovation is critical to the survival of SMEs, and is needed to enhance operational problem solving (Bouzari et al., 2023). A problem-solving approach dubbed after the computational process in computers has been suggested for SME managers (Nuar et al., 2021), where complex problems are broken down into smaller, manageable units, identifying patterns, developing step-by-step solutions and using abstraction to focus on the details. Thus, managers are expected to have the skill that enables them to consider these different units of the problem when attempting to proffer a solution (Daft, 2012).

Since SMEs face numerous challenges, a competent managers must possess the right problem-solving skills to address these obstacles effectively. The adoption of newer technology in production, minimises complaints from employees and improved productivity (Péntek & Kovacs, 2025). As an aspect of planning and administration, competent managers are able to monitor business information actively and utilise it to recognise symptoms, issues, and potential solutions (Chikwe & Biriowu, 2019). They can identify issues, analyse root causes, and implement viable solutions. Problem-solving competency enables managers to think critically, be proactive, and resolve problems efficiently, ensuring the smooth functioning of the SME.

Relationship Management: People management is one of the managerial competencies studied in the literature (Sangka et al., 2019). Competent managers excel in building and maintaining relationships with stakeholders, including employees, customers, suppliers, and business partners (AlQershhi et al., 2020; Daft, 2012). Relationship management competence expects SME managers to build trust, enhance open communication and mutual support

between employees and management, and utilise new technologies to enhance communication (Odonkor et al., 2024). Hence, managers are expected to possess strong interpersonal skills, including effective communication, negotiation, and conflict resolution abilities. Also, positive stakeholder relationships contribute to the overall success and sustainability of the SME (Adiguzel, 2018).

From the empirical studies above, managing people is a key skill for SME owners. Hence, it should not be about giving orders, but creating a collaborative work environment where employees feel that they are needed and building strong, positive relationships. This includes not only employees but also customers, suppliers, and other business partners. A competent manager knows how to earn trust, keep communication open and honest, and create a supportive environment where people feel heard and respected. It also means using technological tools, such as messaging apps or digital platforms, to stay connected and make communication with management easier. Communications must be clear, managers must handle disagreements calmly, and find a win-win solutions when problems arises.

Research Gap Analysis on Managerial Competence in SMEs

From the theoretical discussion above, the need to provide further insight into the managerial competencies that enhances people-management in SMEs will not only enhance academic discourse in this area, but enable SME owners to seek the needs that supports people-driven management and leadership. The need to provide further insight into the managerial competencies that enhance people-management in SMEs is strongly supported by the reviewed literature. Relationship management, as highlighted in the texts, is a critical managerial competence that enables SME owners to build trust, nurture open communication, and promote collaboration across stakeholders (AlQershi et al., 2020; Odonkor et al., 2024). This underscores the centrality of people-management to the sustainability and success of SMEs. Furthermore, the recognition that competent managers create supportive environments where

employees feel valued points to the need for deeper academic exploration of interpersonal and communication-driven competencies that support effective leadership in SME contexts. Additionally, leadership competence has been ranked as the most important managerial skill in empirical studies (Sangka et al., 2019), further reinforcing its relevance to people-management. The literature points to the role of leadership styles - such as democratic, laissez-faire, and transformational - in shaping employee motivation, job satisfaction, and engagement (Northouse, 2016, 2019; Biloa, 2023; Qalati et al., 2022). These leadership behaviours are essential for creating people-centred management structures where employees are empowered, collaborative, and innovative. The relationship between leadership style and employee outcomes suggests a pressing need to investigate how SME managers can develop leadership competencies that support inclusive and participatory management approaches. Beyond leadership and relationship management, other competencies — including decision-making, adaptability, and problem-solving — also contribute to effective people-management. For instance, decision-making involves engaging employees in strategic processes, while adaptability equips managers to respond to workforce dynamics and market shifts (Daft, 2012; Brozović et al., 2023). Likewise, problem-solving skills enhance a manager's ability to manage interpersonal conflicts and maintain team functionality. These intersecting skills demonstrate that people-management in SMEs is not confined to HR practices but is deeply embedded in broader managerial behaviour and competence.

The literature also emphasise the contextual nature of SME management, noting that many SME owners act as both leaders and decision-makers in informal structures (Pilar et al., 2018). In such settings, personal managerial competence is often the determining factor in how people are managed and led. This highlights the importance of understanding which competencies are most effective for people-driven leadership in resource-constrained, dynamic SME environments.

Therefore, while existing literature identifies several core managerial competencies, there is a clear gap in exploring how these competencies collectively enhance people-management in SMEs. Addressing this gap would not only enrich academic discourse but also equip SME owners with the tools to promote a more human-centric leadership approach, ultimately contributing to improved organisational outcomes and employee well-being

Operationalisation of Managerial Competence Measures

The operationalisation of the relevant managerial competencies investigated in this doctoral work are discussed from the perspective of both structural and contextual dimensions of organisational theory (Daft, 2008). As detailed in Daft (2008), the contextual dimensions of an organisation define its overall characteristics—such as size, technology, external environment, and strategic goals—offering insight into the broader setting in which it operates. In contrast, structural dimensions focus on the internal features of an organisation, providing specific labels to describe its internal design and functioning. Together, these dimensions serve as essential tools for analysing, measuring, and comparing organisations across various industries and scales.

Organisational structure encompasses various dimensions that define how tasks and responsibilities are allocated, coordinated, and supervised within an organisation. One such dimension is formalisation, which refers to the extent to which an organisation depends on written documentation—such as procedures, regulations, job descriptions, and policy manuals—to guide behaviour and activities. A highly formalised organisation typically has a vast collection of documents, while a low level of formalisation implies a more informal approach. Small and Medium Enterprises (SMEs) often exhibit low formalisation due to their smaller size and flexible operational styles, which result in minimal documentation.

Another key structural element is specialisation, or the degree to which organisational tasks are divided into separate jobs. High specialisation means employees perform narrowly

defined roles, whereas low specialisation involves broader responsibilities. In SMEs, specialisation tends to be low, as employees often take on multiple roles to maximise efficiency within small teams. While this approach enhances flexibility, it may limit employees from developing deep expertise in specific areas (Agwu & Emeti, 2014).

The hierarchy of authority outlines the reporting structure and span of control within an organisation. A narrow span of control results in a tall hierarchy with multiple management layers, while a wider span of control leads to a flatter structure. SMEs generally operate with flat hierarchies, facilitating direct communication and swift decision-making. However, this can place substantial pressure on team leaders, potentially leading to burnout due to the broad scope of responsibilities.

Centralisation describes where decision-making authority resides within the organisation. In centralised structures, decisions are made at the top levels, whereas decentralised organisations distribute authority to lower levels. In SMEs, centralisation is common, with decision-making often concentrated in the hands of the owner or manager (Agwu & Emeti, 2014). Although this can ensure swift decisions, it may discourage shared leadership and reduce opportunities for innovation.

The dimension of professionalism indicates the level of formal education and training required by employees. High professionalism entails significant educational attainment and training, while low professionalism relies more on practical experience. SMEs often exhibit varied educational backgrounds among staff, with minimal long-term training and an emphasis on hands-on skills. This is evident in their reliance on simple technologies and labour-intensive processes (Agwu & Emeti, 2014), which can result in physical fatigue and employee burnout.

Lastly, personnel ratios refer to the distribution of employees across various organisational functions, including administrative, clerical, and professional roles. These ratios are typically calculated by dividing the number of employees in a particular category by the

total number of staff. In SMEs, departments tend to be smaller with fewer administrative roles, leading to limited specialisation. As a result, innovation is often driven by the owner-manager (Agwu & Emeti, 2014), who plays a central role in shaping business strategy and operations.

Also, the *contextual dimensions* of an organisation provide a broader view of its operational landscape and strategic orientation. One such dimension is size, commonly measured by the number of employees, although total sales or assets can also be indicators. For SMEs, size is a critical factor reflecting their limited human and financial resources and localised market reach. Understanding the size of an SME is essential for assessing its growth capacity and scalability.

Organisational technology involves the tools, techniques, and processes used to convert inputs into outputs. This includes production methods, information systems, and digital platforms. SMEs may face budget constraints that limit their access to advanced technologies, yet they often adapt by using simpler or industry-specific solutions. For instance, SMEs operating in the Nigerian oil and gas sector may adopt specialised technologies tailored to their niche, balancing cost and efficiency.

The environment encompasses all external elements influencing the organisation, including customers, suppliers, government, and industry dynamics. While SMEs often experience more localised environmental influences, their success can hinge on strong community and stakeholder relationships. Nonetheless, SMEs serving broader markets, such as those in the Nigerian oil and gas industry, may encounter global competition, necessitating enhanced competitiveness and adaptability to survive and grow in international markets.

Goals and strategy define the overarching purpose of the organisation and the tactics used to compete and succeed. Previous studies indicate that the entrepreneur plays a vital role in setting a company's goals (Ioniță, 2013). Goals serve as enduring statements of intent, while strategy outlines resource allocation and activities. SMEs typically pursue specific, focused

goals and employ flexible strategies that allow them to respond quickly to market changes. These strategies may aim at serving specific groups of customers or offering tailored services. However, such flexibility may lead to role conflict, as employees are often required to undertake tasks outside their formal expertise.

Lastly, organisational culture represents the shared values, beliefs, and norms that shape employee behaviour and cohesion. This cultural fabric is evident in practices, dress codes, ceremonies, and informal norms. In SMEs, culture tends to be informal and tightly knit, often influenced heavily by the owner's vision. A strong, unified culture can nurture innovation and loyalty, helping the SME thrive in competitive environments by leveraging internal cohesion and shared purpose.

Managerial competence involves the skills and knowledge required to navigate complex business environments effectively, directly impacting managerial effectiveness—the ability to achieve organisational goals efficiently. In SMEs, where resources are limited (Agwu & Emeti, 2014), effective managers promote team cohesion by aligning individual efforts towards shared objectives, thereby strengthening collaboration and resilience.

Moreover, SMEs often face high uncertainty characterised by role ambiguity and role conflict, which can undermine performance. Competent managers mitigate these challenges by clarifying roles, reducing conflicts, and adapting strategies to dynamic market conditions. This uncertainty management is vital for sustaining operational continuity and competitive advantage.

The integration of structural elements (formal roles, processes) with contextual factors (culture, environment), can enable managers develop a holistic approach that balances stability and flexibility. This dual focus supports decision-making agility and cohesive teamwork, essential for SMEs' survival amidst turbulence. Thus, managerial competencies that address

effectiveness, team cohesion, and uncertainty management collectively enhance SMEs' capacity to endure and thrive in volatile business landscapes. as follows:

Efficient Decision-Making

According to Daft (2012, p. 214), “decision making is the process of identifying problems and opportunities and then resolving them.” Daft (2012) characterises managers as individuals responsible for making decisions. Strategic decision-making plays a fundamental role in ensuring the sustainability and advancement of enterprises (Wu et al., 2017). Possession of appropriate competencies equips managers with the essential knowledge and skills needed for making well-informed decisions. Through the deterministic analysis of situations, evaluation of risks, and identification of efficient strategies, managers enhance their decision-making abilities, contributing to the expansion and prosperity of small and medium enterprises (SMEs). Effective decision-making stands as a pivotal component of managerial aptitude, given that the selections undertaken determine an organisation's approach to handling challenges, allocation of resources, and accomplishment of objectives (Daft, 2012). In the context of organisational structural dimensions, SMEs benefit from low formalisation and a flatter hierarchy, enabling quicker and direct communication. However, decision-making often rests with the owner/manager (Agwu & Emeti, 2014; Chikwe & Biriowu, 2019; Diskiene et al., 2018; Lara & Salas-Vallina, 2017), which can hinder shared leadership and innovation.

The support for team-cohesion-driven managerial competence with emphasis of shared-leadership managerial approach is supported in literature. For instance, Barnett and Weidenfeller (2016) suggests that shared leadership—where influence and decision-making are distributed across team members—enhances team cohesion and overall performance. Unlike traditional vertical leadership, shared leadership encourages mutual accountability, collaboration, and adaptability, which are critical in complex and interdependent work environments. Furthermore, the literature indicates that establishing a shared understanding of

team goals and context is also essential. This alignment facilitates open communication, trust, and the willingness to share leadership responsibilities.

In an empirical study in the literature (Wu et al., 2017), top management teams (TMTs) were examined in Chinese enterprises. The study shows that psychological ownership plays a moderating role in the relationship between managers' characteristics and decision-making. Psychological ownership is a concept linked to a manager's sense of ownership and responsibility. Consequently, the study highlights the importance of having managers with the necessary decision-making competencies in SMEs as it significantly impacts on the performance and long-term sustainability.

Two factors that can affect a manager's decision-making process are the operating environment and enterprise resources, thus informing the need to assess the experience of the manager (Wu et al., 2017). Hence, effective decision making can enhance effectiveness and efficiency. For a team-oriented work setting, it is important to investigate if the workforce need to obtain approval from the manager/owner for routine tasks and decisions, are empowered to engage in decision-making processes, and feel at ease approaching the manager directly for discussions and decisions. This is important because of the benefits of group decision making process highlighted in the literature (Yukl, 2013), including prevention of withdrawal, increasing and equalising participation, discovering and resolving process problems, and increasing comprehension. The shared approach to decision making was beneficial for team cohesion which is the main outcome of this study. Nigeria is a high power distance cross-culture, hence decision-making is expected to be autocratic (Yukl, 2013). The information is supported by Hofstede's Insight website for Nigeria (Hofstede, n.d.), which highlights a notable power distance within individuals and a hierarchical social structure, emphasising the importance of respecting authority and seniority, with decision-making predominantly concentrated among higher-ranking individuals. The website offers a

comprehensive examination of Nigeria's cultural dimensions, outlining the fundamental features of its culture and societal conventions, in light of the nation's rich diversity stemming from its 250+ ethnic groups. Thus, there is the likelihood of the absence of shared decision-making approach, and the associated effect on team cohesion.

Resource Optimisation

Optimisation is simply finding the best solution to a problem (Badiru & Osisanya, 2013), providing the highest quality and the right outcome (Forsyth, 2010), hence it is linked to decision making. SMEs tend to have limited resources, especially in terms of personnel ratios and organisational technology (Agwu & Emeti, 2014; Chikwe & Biriowu, 2019). Thus, the managers of SMEs need to optimise their workforce by encouraging diverse roles for employees. Leveraging available technology efficiently can also enhance productivity and competitiveness. The four primary functions of management are planning, organising, leading, and controlling (POLC), with planning being consistently regarded as the foundational element for achieving success within an organisation (Daft, 2012). Essential to effective planning is the prudent allocation of resources, a critical aspect. While planning establishes the overarching managerial strategy and necessary actions for attaining organisational objectives, resource optimisation guarantees the judicious distribution of available resources to execute these plans with efficiency. Given the uncertainties inherent in supply and demand, existing literature (Santos et al., 2013) underscores the importance of optimising the alignment between planned job roles and the competencies of workers. Nevertheless, in the context of smaller organisations, resource planning often assumes an informal nature (Daft, 2012).

To tackle the challenges stemming from uncertain supply and demand requisites, the optimisation of resource allocation, particularly concerning the workforce, holds significant significance for small and medium-sized enterprises (SMEs). This optimisation entails harmonizing job roles with the skill sets and competencies possessed by employees. However,

due to the typically informal approach to resource planning in numerous small organisations, effectively managing uncertainties in supply and demand becomes notably more intricate. Engaging in planning devoid of resource optimisation can result in inefficiencies, setbacks, and escalated expenditures. Competent managers possess the expertise to optimise scarce resources, encompassing financial assets, personnel, and equipment, thereby maximising productivity and accomplishing organisational objectives (Yang, 2016). It is therefore the intention of this study to investigate if SME managers/owner: (i) proactively motivates individuals by offering incentives to assume varied responsibilities; (ii) evaluates and recognises employees' assorted skills and talents to enhance their roles within the organisation via performance discussions; and (iii) provides the required technology and provides training to staff in order to elevate productivity and competitiveness. These managerial skills can contribute to team cohesion by promoting a positive and supportive work environment, promoting individual growth, and enhancing the overall effectiveness and bonding of the team in the context of SMEs.

Firstly, proactive motivation of workers through incentives to take on diverse responsibilities preserves the sense of shared purpose and commitment among team members, as team members perceive their contributions being valued and rewarded, leading to a more cohesive team. Secondly, the evaluation and recognition of employees' diverse skills and talents through performance discussions not only acknowledges individual strengths but also helps in aligning team members with tasks that aligns with their abilities. This targeted approach improves collaboration, reduces conflicts, and contributes to a more harmonious and cohesive team dynamic.

Thirdly, and finally, the provision of the required technology and training to enhance productivity and competitiveness demonstrates the manager's commitment to the growth and development of the team. This investment in their skill enhancement and well-being not only

improves team members' job satisfaction but also enhances their sense of belonging, resulting in increased team cohesion. Self-improvement is the intentional actions that employees undertake to enhance their knowledge, skills, and abilities (Podsakoff et al., 2000), and this can enhance resource optimisation if the manager creates the right environment for innovation to thrive.

Adaptability and Flexibility

SMEs operate in a dynamic environment, where they must adapt to changes in the industry, government regulations, and customer demands. Their flatter structures and smaller size can facilitate quicker adjustments, but they need to promote flexibility and adaptability in their workforce to remain successful. This aspect of a manager's skillset involves maintaining the trust of customers amidst the ever-changing dynamics between supply and demand. This empowers the organisation to effectively navigate shifts in the business environment by exhibiting the necessary behavioural adjustments (Daft, 2012). Small and medium-sized enterprises (SMEs) frequently encounter challenges arising from unpredictable fluctuations in demand and supply, as previously discussed.

Competent managers possess the capacity to swiftly adapt to shifting circumstances, embrace innovative solutions, and respond to emerging market trends. Their agility not only ensures SMEs remain competitive but also positions them to capitalise on opportunities within the rapidly evolving business landscape. Furthermore, workforce adaptability represents a critical aspect of human capital capabilities that enhance overall performance (Daft, 2012). Adaptability and flexibility are dimensions of organisational culture (Cameron & Quinn, 2011; Denison et al., 2014). Empirical results suggest that workers can adapt to the existing organisational cultural dimensions through long-term orientation and uncertainty avoidance cross-culture (Umuteme, 2024; Umuteme & Adegbite, 2023). Culture refers to the beliefs and values which collectively shape the attitudes and behaviour of employees (Schein, 2010; Tsai,

2011). Thus, SMEs can benefit from the concept that workers can adapt to existing organisational cultural dimensions through long-term orientation and uncertainty avoidance cross-culture in several ways. When employees in SMEs adapt to their organisation's culture effectively, they are more likely to align with the company's values and goals. This alignment can lead to increased job satisfaction, motivation, and ultimately, higher levels of performance and productivity.

With the leadership in the workplace becoming occupied by millennials and generation employees, studies suggest that managers can improve adaptability through incentives (Gallup, 2016; Laudert, 2018; Umuteme, 2020). For millennials, the desire for leadership positions is a driver for organisational adaptability (Umuteme, 2020). By employing adaptive leadership strategies, organisations can cultivate favourable work atmospheres and nurture collective intelligence among the younger workforce generation (Laudert, 2018). Since workers are able to adapt through the adoption of long-term orientation which is the tendency to save for tomorrow, it implies that increase in employee remuneration as reward for performance can enhance adaptability. It is important for managers to encourage open communication for employees to enhance strategic management process, which is relatively lacking in small businesses (David, 2011). This feedback can be used to make necessary adjustments to improve cultural alignment. Therefore, it is the responsibility of SME owners/managers to provide the necessary work environment for adaptability and flexibility to thrive.

Small and medium-sized enterprises (SMEs), are particularly vulnerable to economic downturns. Focusing on the Greek economic crisis—findings from empirical studies conducted under these adverse conditions highlight that survival hinges on three key elements (Kottika et al., 2020): (i) entrepreneurs' personality traits and competencies, which influence both market and entrepreneurial orientations; (ii) the strategic adoption of these orientations, which have a sustained impact on firm performance; and (iii) the execution of strategies aimed at achieving

higher product and service quality, alongside tactics such as downsizing, targeted marketing, increased extroversion, and sound financial management.

In parallel, modern organisational demands—emphasising greater flexibility, innovation, creativity, and employee initiative (David, 2011)—are reshaping employee expectations within SMEs. When aligned with the right organisational culture, these demands can motivate employees to become more adaptive and innovative (Dasgupta & Gupta, 2009), ultimately supporting business continuity in volatile environments. Although insufficient funding often limits innovation adoption funding (Gachara & Munjuri, 2018), SMEs can counteract this challenge by streamlining operations and reducing inefficiencies to reallocate resources strategically. Moreover, ensuring employees have the necessary skills to transition into evolving roles is essential; without these capabilities, resistance to change may arise, threatening engagement and undermining organisational resilience (Zaccaro & Klimoski, 2001).

Effective Leadership

Leadership in SMEs is crucial for guiding the organisation toward its goals. The owner/manager plays a significant role in shaping the organisational culture and decision-making. Effective leadership should encourage innovation, manage people well, and promote teamwork. One of the essential skills expected from a manager is the capability to lead effectively. Competence in this area empowers managers to set a positive example, thereby motivating and inspiring their teams to excel in their performance. Consequently, the dynamic relationship between leaders and followers has a substantial impact on job satisfaction and productivity in the workplace, as noted by Graen and Uhl-Bien (1995). The literature offers various leadership styles, and it is crucial for managers to adopt the most appropriate leadership behaviours to cultivate the right type of followership, as emphasised in Northouse (2019). A manager is required to possess effective communication skills, the ability to delegate tasks,

offer constructive feedback, and promote a conducive work environment. Moreover, electronic communication technologies have improved the frequency of workplace communication (Avolio & Dodge, 2001). Proficient leadership exhibited by competent managers significantly elevates employee morale, engagement, and overall productivity through communication. Consequently, leadership emerges as the most prominent competency in empirical studies of managerial skills, as demonstrated in Sangka et al. (2019). The research findings suggest a positive correlation between transactional leadership and employee motivation in situations where the job is relatively simple and lacks monotonous as in some SMEs (Chaudhry & Javed, 2012).

Additionally, it is proposed that the transactional leadership style can have an adverse effect on employee job satisfaction due to its tendency to promote unhealthy competition among employees through the use of contingent rewards (Folakemi et al., 2016). Also, Rowold and Schlotz (2009) shows that an excessive workload, coupled with insufficient motivation, can result in employees becoming dissatisfied with their duties. From here, it is important to debate what leadership behaviour should be adopted by SME owners/managers. The adoption of multiple leadership approaches to enhance project success has been advocated in the literature (Umuteme, 2024). Will this fit within the context of leadership in SMEs? The drive for this study is the influence of managerial competence on team cohesion, hence the right approach to leadership must encourage team bonding and performance.

As per the leadership grid established in the literature (Blake & Mouton, 1981), when leadership demonstrates a lack of concern for people, the organisation's productivity significantly decreases. Teamwork can promote and enhance work commitment (Morrow, 1997), where team cohesion is encouraged through the social interactions among employees (Zaccaro & Klimoski, 2001). This dimension of managerial competence investigates if SME managers: (i) demonstrates competence and a strong ability to encourage and support

innovation within the organisation; (ii) possesses the competence and ability to effectively manage and develop the talents of employees in the organisation; (iii) exhibits competence in promoting teamwork and collaboration among employees, promoting an environment of synergy and cooperation; and (iv) are open to feedback and suggestions from employees and enhances their effectiveness in advancing a culture of continuous improvement and growth.

Problem Solving

SMEs may face unique challenges due to limited resources and specialisation. Effective problem-solving skills are essential to address these challenges and find practical solutions. A culture that values innovation and encourages employees to contribute ideas is beneficial for problem-solving in SMEs. Problem solving starts with managers leading with clear vision and direction, so that their followers are willing to take ownership of the work process (Northouse, 2019). This enable them to become empowered through participative decision making (Bennis & Nanus, 1985), providing constructive decisions (Podsakoff et al., 2000). Managers are anticipated to possess the skill set that empowers them to explore various alternatives when tackling issues, as mentioned by Daft (2012). Small and medium-sized enterprises (SMEs) confront numerous challenges, and effective managers are required to possess the appropriate problem-solving abilities to effectively address these hurdles. As part of their planning and administrative duties, competent managers have the ability to actively monitor business data and employ it to detect signs, challenges, and potential solutions, as highlighted by Chikwe and Biriowu (2019). They can recognise problems, investigate underlying causes, and proffer practical solutions. Proficiency empowers managers to engage in critical thinking, take proactive measures, and efficiently resolve issues, thereby ensuring the seamless operation of the SME. This measured variable of managerial competence investigates if: (i) employees are motivated to offer my ideas or suggestions for problem-solving; (ii) creative proposals put forth by employees to address issues or enhance work procedures are adopted and implemented by

the manager; and (iii) the manager is receptive to investigating fresh concepts and resolutions for current challenges. These contexts of problem-solving benefit problem-solving by cultivating a work environment where individuals feel empowered and motivated to contribute their ideas and competencies. This encourages innovation and creative thinking, resulting in a diverse range of solutions and approaches to effectively address challenges and enhance problem-solving processes.

Relationship Management

In SMEs, the close-knit culture and direct communication allow for effective relationship management. Building strong relationships with customers, suppliers, and the local community is crucial for the success of SMEs. A customer-centric approach can help SMEs in niche markets thrive. People management is one of the managerial competencies studied in the literature (Sangka et al., 2019). Competent managers excel in building and maintaining relationships with stakeholders, including employees, customers, suppliers, and business partners (Daft, 2012). They are equally expected to possess strong interpersonal skills, including effective communication, negotiation, and conflict resolution abilities. Also, positive stakeholder relationships contribute to the overall success and sustainability of the SME. This measured variable investigates if: (i) SMEs managers use feedback from customers, suppliers, and the local community to improve our services; (ii) employees in SMEs are satisfied with my organisation's relationship management efforts with staff, clients and local community; and (iii) the manager identifies and addresses any potential conflicts or misunderstandings that may arise in the course of relationship management with stakeholders.

Table 2.1, below present the operationalised measurement variables. The 5-scale Likert measurement criteria for managerial competence are defined as follows: The definition of the ratings is as follows: *Strongly Disagree (1), Disagree (2), Neutral (3), Agree (4), Strongly Agree (5)*. The number “5” is the highest rating for each question.

Table 2.1*Operationalised measurement variables for managerial competence*

Measured Variable	Operationalised Questions
Efficient Decision-Making	<ol style="list-style-type: none"> 1. I need to seek approval from the manager/owner for routine tasks and decisions. 2. I am empowered to participate in decision-making processes. 3. I feel comfortable approaching the manager directly for discussions and decisions.
Resource Optimisation	<ol style="list-style-type: none"> 1. The Manager actively encourages and motivates me through incentives to take on diverse roles. 2. The Manager assess and identify the diverse skills and talents of employees to optimise their roles within the organisation through performance discussion. 3. The Manager provides the needed technology and trains staff for enhancing productivity and competitiveness.
Adaptability and Flexibility	<ol style="list-style-type: none"> 1. The current level of communication and collaboration within the organisation is able to address the needed changes and challenges for sustainable growth. 2. I received adequate training and needed resources to cope with the ever-changing demands and requirements in our industry. 3. I am comfortable to face unexpected challenges or changes in my job responsibilities.
Effective Leadership	<ol style="list-style-type: none"> 1. The Manager encourage and support innovation within the organisation. 2. I believe the Manager effectively manages and develops the talents of the employee in the organisation. 3. The Manager promote teamwork and collaboration among employees. 4. The Manager is open to feedback and suggestions from employees.
Problem Solving	<ol style="list-style-type: none"> 1. I am encouraged to contribute my ideas or suggestions for problem-solving. 2. Innovative ideas suggested by employees to solve problems or improve processes are implemented. 3. The Manager is open to exploring new ideas and solutions for existing challenges.
Relationship Management	<ol style="list-style-type: none"> 1. Our organisation use feedback from customers, suppliers, and the local community to improve our services. 2. I am satisfied with my organisation's relationship management efforts with staff, clients and local community.

	3. The Manager identifies and addresses any potential conflicts or misunderstandings that may arise in the course of relationship management with stakeholders.
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Theoretical Framework on Managerial Effectiveness

The study of managerial effectiveness (ME) has gained prominence due to prior research emphasising its pivotal role within an organisation. Effectiveness is most appropriately perceived as the outcome a manager generates through skilful management of a given situation (Fonceca et al., 2017). This statement suggests that the effectiveness of a manager should be primarily evaluated based on the results they achieve by competently managing a particular situation. This perspective aligns with the broader understanding of effectiveness in management. However, achieving managerial effectiveness in SMEs is dependent on the influence of the following factors that resonates within the structure of SMEs discussed in the literature (Agwu & Emeti, 2014): (i) streamlined management hierarchy, (ii) casual employer-employee relationship, (iii) labour-intensive processes, (iv) adoption of simple and basic technological infrastructure, (v) integration of ownership and management, and (vi) constrained accessibility to funding. Each of these peculiarities defines the approach to achieving managerial effectiveness within SMEs.

A previous study in the literature (Pranitasari, 2019), suggests that managerial effectiveness positively defines the nature of the work environment and teamwork. The study conducted by Diskiene et al. (2018) suggests a positive relationship between managerial roles and perceived managerial effectiveness. This finding aligns with the “action and performance theory” proposed by Boyatzis (1982). According to this theory, effective managers are those who not only possess the necessary skills and competencies but also take proactive actions in their roles. In other words, it emphasises the importance of managers not just having the right qualifications but also being able to apply them effectively in their daily tasks. This perspective

underscores the dynamic nature of managerial effectiveness, where it is not merely about what managers know, but how managers apply that knowledge in their actions.

Furthermore, the assertion made in the study is in line with the general consensus in the literature that the effectiveness of managers should be closely aligned with the needs of the organisation. Pickett (1998) supports this idea by emphasising the importance of ensuring that the competencies of a manager match the specific requirements of the organisation. This implies that an effective manager should not only possess the skills demanded by their role but should also tailor their actions to address the unique needs and objectives of their organisation.

Additionally, Enshassi and Burgess (1991) provide further empirical evidence supporting the relationship between managerial style and managerial effectiveness. Their study suggests that the managerial style adopted by managers can have a significant impact on their effectiveness in a particular work context. This finding reinforces the notion that effective management is not a one-size-fits-all concept but is influenced by various factors, including the style of leadership and management practices employed.

In their study, Analoui et al. (2010) propose that managerial effectiveness (ME) is a comprehensive concept that entails the skilful management of both tasks and people within an organisational context. This perspective aligns with a holistic view of management, emphasising that effective managers not only excel in achieving organisational objectives but also promote positive relationships and productivity among their team members. Hence, decisions should be based on evidence-based-management (Robbins & Judge, 2024). Analoui et al.'s perspective on managerial effectiveness underscores the importance of balancing task and people management. This approach not only promotes effective management, but also enhances team cohesion.

One notable implication of this perspective is the strong linkage between managerial effectiveness and team cohesion. When managers effectively balance the dual responsibilities

of task management and people management, it contributes to a harmonious work environment where team members collaborate, communicate, and work together more efficiently. In such a context, team cohesion is enhanced, leading to improved performance and overall organisational success.

Moreover, Analoui et al. (2010) also identify several factors that can hinder the effectiveness of work teams. These impediments include inadequate appraisal systems, excessive workloads, ineffective human development policies, a lack of career planning, and insufficient emphasis on strategic management development. These obstacles can undermine both task and people management efforts, which can ultimately diminish the success of team cohesion and managerial effectiveness. Nonetheless, organisations must address the identified impediments to optimise managerial effectiveness and stimulate a conducive work environment for their teams. These insights collectively highlight the multifaceted nature of managerial effectiveness, as expressed in the literature (Analoui, 1999; Analoui et al., 2010; Atiase et al., 2023; Fonceca et al., 2017), and emphasise the importance of considering both competence and action in evaluating managers' performance in an organisational context (Pickett, 1998).

For small and medium-sized enterprises (SMEs) in the oil and gas industry, these findings carry significant implications for survival and success. In this sector, SMEs often face unique challenges, including resource constraints, intense competition, tedious contracting pre-qualification and tender processes, and complex regulatory environments (Bassey, 2025; Ihua, 2010; Ocheni, 2015). Firstly, SMEs in oil and gas must recognise that ME goes beyond achieving operational targets. Effective management involves nurturing a motivated and cohesive workforce, which can be a critical factor in a sector where teamwork is essential for safety and project execution. Secondly, addressing the impediments identified by Analoui et al. (2010), such as inadequate appraisal systems, excessive workloads, and ineffective human

development policies, becomes paramount. SMEs in the oil and gas industry should invest in robust HR practices, professional development, and strategic management to optimise ME and team cohesion.

For SMEs in the oil and gas industry, understanding and implementing the principles of ME as outlined by Analoui et al. (2010) can be pivotal for survival and growth. A balanced approach to task and people management can enhance team cohesion, ultimately leading to improved operational efficiency and competitiveness in this demanding sector. The assessment of a manager's effectiveness can be examined through several dimensions, each of which has been discussed by various authors mentioned earlier.

Setting Clear and Achievable Goals (Diskiene et al., 2018): Diskiene et al. (2018) suggest that effective managers set clear and achievable goals and objectives for their teams. Thus, a manager's ability to define specific, measurable, achievable, relevant, and time-bound (SMART) goals is fundamental to effective management. The literature (Ioniță, 2013), suggests that the duty of setting the goals of the business rests with the owner/manager, and that this defines the functional capabilities needed for growth. Also, empirical study in the literature (Saah, 2022), emphasises the need for SMEs to develop strategic business plans where the clear achievable goals to increase the chances of survival.

Again, the application of IT in strategic planning for SMEs has also been established in the literature (Moleté et al., 2025), as it enhanced business planning, but decried the fact that most SMEs hardly adopt IT software in setting clear and achievable goals. Thus, setting clear and achievable goals is essential for business success, especially for small and medium-sized enterprises (SMEs). Managers and business owners play a key role in defining these goals, to shape the direction and growth of the business. While strategic planning and goal setting are widely recommended, many SMEs still struggle to adopt helpful tools like IT software in this

process. Strengthening goal-setting practices can help improve business performance and increase the chances of long-term survival of SMEs.

Tracking Progress and Adjusting Strategies (Boyatzis, 1982): Boyatzis (1982) in his “action and performance theory” emphasises the importance of tracking progress and making necessary adjustments. Managers who actively monitor progress toward goals and adapt strategies when necessary demonstrate an understanding of the dynamic nature of their role. However, the literature (Jones et al., 2024), noted that SMEs usually adopts a reactive approach to progress management because of its unstructured management structure, and recommended an improvement in the “depth of engagement” with the the business processes. Again, the need to enhance adaptive practices through continuous improvement in organisational learning and process, and clear communication has been emphasised (Quansah et al., 2022), as this approach can enhance progress tracking and adjusting business strategies to meet the evolving needs if business. The emphasis of managerial effectiveness through progress management has been emphasised so far, supporting the need for consistent progress tracking and refining strategies as vital success factors for business. While larger firms may have structured systems in place, SMEs often fall behind due to reactive management styles (Hokmabadi et al., 2024). To overcome this, SME businesses should focus on deeper engagement with their operations, encourage continuous learning, and maintain clear communication. These efforts can support better adaptability and help align strategies with changing business needs, ultimately leading to more sustainable growth and improved overall performance.

Making Timely and Informed Decisions (Pickett, 1998): Pickett (1998) highlights the need for managerial decisions to align with organisational goals. Effective managers should possess the knowledge and judgment to make timely decisions that support the overall direction of the organisation. The emphasis for data-driven decision making in SMEs based on the outcome of recent empirical studies and literature review (Quansah et al., 2022; Sucu, 2020;

Žilka et al., 2024), is expected to encourage efficient decision making process as more proactive managerial practices in SMEs continue to evolve. These insights affirm that timely and informed decisions, supported by data and aligned with organisational goals, can promote a more efficient workflow. When SME managers act with clarity and purpose, decisions are expected to promote a stronger collaboration among team members and ensure the alignment decisions with task execution. As proactive practices continue to emerge in SMEs, the integration of informed decision-making becomes an integral aspect of growth and sustainability. This approach strengthens available communication channels, supports coordinated work and managerial efforts, and ultimately enhances teamwork and task-oriented delivery.

Communicating Goals and Progress (Enshassi & Burgess, 1991): Enshassi and Burgess (1991) suggest that managerial style can impact effectiveness. Effective communication is an essential component of a manager's role in furthering team cohesion. Clear and transparent communication helps in aligning the efforts of the team with the organisational goals. Again, the need for clear communication of goals and progress is highlighted as important for teamwork (Zajac et al., 2021).

One of the important aspect of managerial effectiveness that was derived from the *relationship management* competence of a manager, is relationship building (Analoui, 1999). Three main internal factors have been outlined in the literature to enhance the use of ICT in enhancing communication in SMEs – the availability of infrastructures and resources, learning and innovation, and management commitment. This aligns with the purpose of problem-solving and effective leadership discussed earlier as important team-driven competencies of an SME owner/manager.

Therefore, effective communication remains a critical factor in strengthening team performance and achieving organisational goals. Clear expectations and progress

communication, are enablers of a shared understanding in maintain alignment within the team. Strong relationship-building skills further enhance this dynamic and collaborative work environment. Additionally, internal elements such as infrastructure, innovation, and management practices play a vital role in optimising communication through ICT in SMEs. Altogether, these components highlights the importance of leadership that is both communicative and adaptive in driving success.

Prioritising Tasks and Delegation (Analoui et al., 2010): Analoui et al. (2010) stress the importance of task and people management. Effective prioritisation and delegation are essential skills for managers. Allocating tasks based on the strengths of team members and optimising resources contributes to task organisation and overall organisational effectiveness. As an aspect of administrative efficiency, task prioritisation and delegation can improve innovation, employee adaptive behaviours through the development of decision making skills, and overall operational effectiveness (Bakare et al., 2024). The unique simple management structure of SMEs, as discussed earlier, often requires a lean approach to management (Kottika et al., 2020), where task prioritisation and delegation are critical to operational efficiency. Hence, SMEs are able to streamline decision-making and embed Talent Development (TD) directly into everyday workflow (Abid & Polo, 2025).

As an advantage, delegation of key tasks to line managers supports more agile task prioritisation and is able to cultivate a proactive, growth-oriented workforce. This is because, delegation not only reduces bottlenecks at higher levels of leadership within organisations, but also ensures that strategic objectives are translated into action at the operational level. It enables better prioritisation of tasks as line managers and supervisors are well-positioned to identify urgent needs, develop team capabilities, and align talent development initiatives with growth-centred goals. Thus, aligning with teamwork and relationship building ideals of managerial effectiveness.

Allocating Resources Wisely (Analoui et al., 2010): Wise allocation of resources, as emphasised by Analoui et al. (2010), ensures optimal outcomes in task organisation. Managers in the oil and gas industry, with its resource-intensive nature, should be skilled in this aspect of managerial effectiveness. The literature (Bouzari et al., 2023), suggest that problem-solving is linked to the efficient allocation of resources through investment in IT infrastructure to drive innovation. The optimal administration of limited resources is highly recommended in SMEs to minimise waste and maximise productivity (Bakare et al., 2024). In another related study, the need to efficiently allocate and manage resources in SMEs was tied to digital literacy (Sualeh et al., 2024), which becomes a challenge as some SMEs rarely adopt recent technologies because of their complexity (Low et al., 2016). Hence, the survival and growth of SMEs in challenging economic environments depend largely on the strategic use of limited resources, strong entrepreneurial leadership, and the ability to adapt through innovation and digital integration. Lessons from prolonged economic crises, as seen in Greece (Kottika et al., 2020), reveal that resilience is not solely a matter of external conditions, but also of internal capacities—particularly the mindset of entrepreneurs, the skills of employees, and the agility of operations. Thus, encouraging a culture of adaptability, enhancing digital competencies, and prioritising efficiency, SMEs can not only endure economic hardships but also emerge stronger and more competitive in the long term.

Therefore, it is imperative that managers, particularly within resource-intensive sectors such as the oil and gas industry, adopt a strategic and results-oriented approach to resource allocation. This necessitates not only technological insight but also the capacity to align digital tools with organisational goals. Efficient task organisation, when underpinned by deliberate investment in digital infrastructure and literacy, can enhance operational efficacy and promotes innovation. Also, the integration of resource allocation with clearly defined outcomes, can become enablers for SME organisations to streamline processes, reduce inefficiencies, and

achieve sustainable competitive advantage. Consequently, the interconnection between resource optimisation and structured task execution can become a critical factor of managerial effectiveness in SMEs.

Utilising Project Management Methodologies and Tools (Analoui et al., 2010): Understanding and employing project management methodologies and tools is especially relevant in industries like oil and gas, where projects are complex with the need for high adaptation to innovation. This adoption of structured project management models can significantly impact task organisation and project success. This aspect of managerial effectiveness is linked to efficient task organisation. The adoption of the 10 knowledge areas from Project Management Institute (PMI), PRINCE2 best practice model, waterfall or agile models, and project scheduling software (Kloppenborg, 2015; Kloppenborg & Petrick, 1999; Sibiya et al., 2023), can improve the overall project delivery process for SMEs in the oil and gas industry.

In essence, the strategic application of these methodologies can equip and SME manager with the tools to break down complex projects into manageable components, streamline workflows, and allocate resources more effectively. The integration well-established project management models and frameworks, project leaders in SMEs can be positioned to anticipate challenges, adapt to dynamic environments, and maintain control over project deliverables. Such alignment will not only ensure the adherence to timelines and budgets, but can also encourage accountability and clarity in the execution of tasks. Ultimately, efficient task organisation emerges, not merely as a byproduct, but as an anticipated outcome based on relentless strategic and methodical planning, that is aimed at serving as the backbone of successful project implementation by SMEs in the oil and gas industry.

Promoting Teamwork and Resolving Conflicts (Enshassi & Burgess, 1991): Enshassi and Burgess (1991) highlight the manager's style in relation to managerial effectiveness.

Effective leadership by example, inspiring and motivating teamwork, providing clear guidance, and demonstrating shared leadership behaviour, can contribute to team cohesion and overall effectiveness. In a detailed approach towards providing the needed skills by managers to enhance teamwork and resolve conflicts, (Adham, 2023) suggests the following: (i) Effective team conflict resolution requires a blend of communication, leadership, emotional intelligence, and collaboration skills; (ii) The manager's ability to maintain open, intentional communication, balancing formal structure with informal dialogue to prevent and manage disputes; (iii) Leaders must provide adaptive support, promote cooperation, and transform conflict into opportunities for creativity and cohesion; (iv) Emotional and cultural intelligence is essentially needed to enable teams to navigate diverse perspectives, regulate emotions, and build inclusive climates; (v) Managerial skills such as contextual awareness, trust-building, and task coordination further mitigate relational tensions; (vi) A collaborative environment that supports psychological safety, openness to feedback, and shared decision-making, is needed to reinforce mutual respect and team alignment; and (vii) Constructive feedback mechanisms and trust development serve as the foundation for sustained engagement and resolution. These aspects of promoting teamwork and enhancing conflict resolution requires core managerial skills in problem-solving, role clarity, empathy, and active listening.

Also, Diskiene et al. (2018) suggest that effective managers can resolve conflicts, actively listen to team members, and exhibit emotional intelligence. The authors assert that these qualities enable effective conflict resolution, furthering a harmonious team dynamic. These qualities are vital for maintaining a harmonious work environment and promoting collaboration.

In the oil and gas industry, where team collaboration, efficient task organisation, and effective conflict resolution are paramount, the abilities and behaviours discussed by these authors are crucial for the survival and success of SMEs. Managers who excel in these areas

are more likely to lead teams that can navigate the challenges of the industry, optimise resource utilisation, and work cohesively to achieve organisational goals.

In the managerial effectiveness model developed in the literature (Analoui, 1999) three high rating aspects of managerial effectiveness are: (i) results-oriented involving setting and attaining goals and objectives; (ii) efficiently organising tasks within specified timeframes to ensure successful outcomes; and (iii) achieving results and promoting teamwork and effectively relating to others to accomplish tasks collaboratively.

In another empirical study in the literature (Fonceca et al., 2017), the three high rating dimensions of managerial effectiveness are in the order of delegation, motivation, and crisis management. Fonceca et al.'s findings offer practical implications for leadership development and organisational success. Managers and aspiring leaders can prioritise honing skills related to delegation, motivation, and crisis management to enhance their overall effectiveness.

Furthermore, organisations, in turn, can use these insights to inform training programs and leadership development initiatives, ensuring that managerial capabilities align with the critical dimensions identified in the study. Delegation, as the foremost dimension, suggests that effective managers recognise the significance of entrusting responsibilities to their team members. Delegating tasks not only distributes workload efficiently but also empowers employees, cultivating a sense of ownership and accountability. This finding aligns with the modern understanding of leadership, emphasising collaboration and shared responsibility.

Motivation emerges as the second high-rating dimension, highlighting its central role in managerial effectiveness. Motivated teams are more likely to be productive, engaged, and committed to organisational goals. Managers who excel in motivation understand the diverse needs and aspirations of their team members, employing strategies that inspire and energise individuals. This dimension reflects the managerial capacity to create a positive work environment and cultivate a culture of enthusiasm and achievement.

Also, crisis management, identified as the third high-rating dimension, underscores the importance of a manager's ability to navigate and mitigate challenges effectively. In today's dynamic business landscape, unforeseen crises are inevitable. Managers who excel in crisis management demonstrate resilience, strategic thinking, and adaptability. Their capacity to lead during turbulent times contributes significantly to organisational stability and resilience.

Dimensions of Managerial Effectiveness

The dimensions of managerial effectiveness adopted in this study are linked to task and people as corroborated in the literature (Analoui et al., 2010). Consequently, the four main contexts of managerial effectiveness derived from the findings in the literature (Analoui, 1999) and investigated in this study include: (1) Results-oriented dimension; (2) Efficient task organisation dimension; and (3) Teamwork dimension; and (4) Relationship-building dimension. The interconnectedness of task and people dimensions in managerial effectiveness is a recurring theme in management literature. Analoui et al.'s exploration of the Results-oriented, Efficient Task Organisation, Teamwork, and Relationship-building dimensions provides a comprehensive framework for understanding the multifaceted nature of managerial roles.

In the 21st century business landscape, where adaptability and collaboration are paramount, managers must navigate these dimensions adeptly to ensure sustained success for both themselves and their teams. The findings from this study contribute valuable insights to the ongoing discourse on managerial effectiveness, offering a nuanced understanding of the key dimensions that shape effective management practices.

Based on the above dimensions of managerial competencies that was investigated in the current study, the following managerial effectiveness dimensions: *Teamwork*, *Relationship Building*, *Result-Oriented* and *Efficient Task Organisation*, are developed for each managerial competence as follows:

Teamwork: Teamwork dimension underscores the importance of collaborative efforts within a team. Managers must not only focus on individual performance but also promote a culture of teamwork and collaboration. This involves creating an environment where team members can synergise their skills, communicate effectively, and collectively contribute to the overall success of the team. In an era where cross-functional collaboration is essential, a manager's ability to cultivate teamwork is a critical determinant of effectiveness.

Teamwork is a fundamental aspect of managerial effectiveness, as it directly influences employee morale, engagement, and collective productivity. Effective leadership plays a central role here, where high levels of employee satisfaction and engagement often reflect a manager's ability to create a motivating and supportive environment (Yukl, 2013). Managers who promote open communication and align team efforts with organisational goals tend to achieve higher team productivity. Moreover, the ability to resolve issues collaboratively and encourage proactive problem-solving enhances team cohesion. Quick issue resolution and anticipatory thinking allow teams to function with fewer disruptions, which is critical in dynamic business environments (Robbins & Judge, 2024). A manager's skill in building cohesive teams and guiding them through challenges is indispensable for sustainable performance.

Therefore, managerial effectiveness under teamwork involve: (1) Measuring the level of employee contentment within teams led by managers; (2) Assessing the level of commitment demonstrated by employees under the manager's leadership; (3) Evaluating the ability to communicate effectively with team members; (4) Measuring the overall productivity and performance of the team under the manager's leadership; (5) Measuring the time taken to identify and resolve problems or obstacles; and Evaluating the ability to anticipate and address potential issues (often requiring team input and collaboration).

Relationship Building: This is another fundamental dimension of managerial effectiveness. Relationship management involves not only ensuring stakeholder satisfaction

but also exercising effective communication and negotiation skills. These abilities contribute to resolving conflicts constructively and promoting stakeholder loyalty (Lussier & Achua, 2016). Managers must be able to build trust and rapport across diverse groups—employees, customers, suppliers, and partners - to ensure alignment and cooperation. Conflict resolution skills are particularly crucial in preventing disruptions and maintaining harmony within teams and across organisational boundaries. Communication effectiveness, a cross-cutting skill, supports both team cohesion and broader relationship-building efforts by ensuring clarity, understanding, and mutual respect (Goleman et al., 2013). The Relationship-building dimension, emphasises the interpersonal skills and relationship-building acumen of a manager. Effective managers recognise the significance of establishing positive and trust-based relationships with team members, superiors, and other stakeholders. This dimension extends beyond the confines of the team, encompassing broader organisational relationships. Managers who excel in relationship-building create a conducive work environment, enhance team cohesion, and contribute to overall organisational harmony.

Consequently, managerial effectiveness under relationship building involve: (1) Measuring satisfaction levels of employees, customers, suppliers, and business partners; (2) Evaluating the ability to communicate and negotiate effectively; (3) Assessing the ability to resolve conflicts and maintain positive relationships; and (4) Measuring the level of ongoing support resulting from the manager's relationship-building efforts.

Result-Oriented: Results-oriented dimension underscores the significance of achieving tangible outcomes and meeting performance targets. Effective managers are those who can navigate the complexities of their roles to deliver measurable results. This dimension encapsulates the manager's ability to set clear objectives, devise strategic plans, and lead their team towards successful goal attainment. In a rapidly evolving business landscape, where

outcomes are pivotal to growth, this dimension serves as a cornerstone for managerial effectiveness.

A strong result-oriented focus is a hallmark of high-performing managers. Efficient decision-making is at the core of this focus, requiring a balance between speed and quality. Decisions must be timely yet well-considered, factoring in risk assessments and strategic implications (Mintzberg, 1973). The ability to implement strategies successfully reflects a manager's competence in aligning decisions with organisational objectives. Complementing this is resource optimisation, where managers are expected to use financial, human, and material resources in a cost-effective manner. Task prioritisation and productivity improvement further reflect a manager's ability to focus on outcomes that drive performance (Mintzberg, 1973). Furthermore, managers must be adaptable and innovative, capable of responding to market trends and seizing competitive opportunities. Adopting innovation and sustaining a competitive edge signify a results-driven leadership style that thrives on achieving measurable outcomes.

Accordingly, managerial effectiveness under result-oriented involve: (1) Evaluating the effectiveness of decisions based on their impact; (2) Measuring the ability to evaluate risks and minimise negative outcomes; (3) Assessing the successful execution of identified effective business strategies; (4) Assessing the ability to optimise resources and minimise costs while maintaining productivity; (5) Measuring the increase in productivity achieved through effective resource optimisation; (6) Assessing the impact and effectiveness of implemented solutions; (7) Measuring the improvement in SME operations resulting from effective problem-solving; (8) Evaluating the ability to embrace innovative solutions in response to market trends; and (9) Assessing the ability to identify and seize opportunities in a fast-paced business landscape.

Efficient Task Organisation: Efficient Task Organisation dimension sheds light on the manager's competence in structuring and organising tasks for optimal efficiency. This dimension encompasses skills such as effective time management, resource allocation, and streamlined workflow processes. A manager excelling in this dimension is adept at orchestrating the intricate dance of tasks, ensuring that the team operates cohesively and efficiently. As organisations grapple with increasing complexities, a manager's proficiency in task organisation becomes paramount for sustained success.

Efficient task organisation underpins much of a manager's day-to-day operational effectiveness. The speed of decision-making, for instance, is critical in high-pressure environments where delays can result in missed opportunities or escalated issues. Well-organised managers are adept at allocating resources appropriately and prioritising tasks based on strategic importance and urgency (Drucker, 2007). Task prioritisation not only enhances efficiency but also ensures that limited resources are channeled toward high-impact activities. Additionally, adaptability contributes to task organisation, as the ability to quickly respond to change enables managers to restructure plans without derailing progress. Proactive problem-solving is also integral to this domain; anticipating issues and acting in advance prevents workflow disruptions and enhances the manager's ability to execute tasks efficiently (Hill & Lineback, 2011). These competencies collectively enable managers to maintain a clear focus, reduce inefficiencies, and lead teams with precision.

Therefore, managerial effectiveness under efficient task organisation involve: (1) Measuring the time managers take to make informed decisions; (2) Evaluating how well managers allocate limited resources for maximum productivity; (3) Measuring the ability to prioritise tasks based on importance and overall efficiency impact; (4) Measuring how quickly managers adapt to changing circumstances; (5) Ensuring efficient task handling by anticipating and preventing delays.

Research Gap Analysis on Managerial Effectiveness in SMEs

Managerial effectiveness has been defined from the perspective of managerial competence, with focus on people-management. In closing the gap in existing studies, this doctoral work, specifically address the need for a mediating effect of team cohesion on the direct relationship between managerial competence and managerial effectiveness. Prior literature acknowledges that effective management is contingent upon a combination of competencies, including the ability to delegate, motivate, resolve conflict, and manage crises (Fonceca et al., 2017; Diskiene et al., 2018). Studies have also emphasised that effectiveness is not merely about acquiring these competencies but lies in the proactive application of these skills in context-specific environments (Boyatzis, 1982; Pickett, 1998). While these competencies have been closely tied to both task and people management (Analoui et al., 2010), the mediating role of team cohesion in enhancing the impact of managerial competence on effectiveness remains underexplored.

Analoui et al. (2010) underscore the importance of balancing task execution with promoting a strong interpersonal relationships, a dynamic effort that directly influences team cohesion. Yet, while existing studies have acknowledged the significance of teamwork and interpersonal dynamics in driving managerial effectiveness (Enshassi & Burgess, 1991; Pranitasari, 2019), few have explicitly examined team cohesion as a mediating construct in this relationship. Particularly within the context of SMEs, where streamlined hierarchies and close-knit team structures are prevalent (Agwu & Emeti, 2014), understanding how cohesive team dynamics amplify or buffer the effects of managerial competence becomes even more critical.

This doctoral research addresses this overlooked dimension by proposing that team cohesion mediates the relationship between managerial competence and managerial effectiveness. Drawing from the comprehensive frameworks established by Analoui (1999) and subsequent studies (Analoui et al., 2010), which identified teamwork and relationship-

building as core dimensions of effectiveness, this study aims to provide empirical evidence on the extent to which team cohesion facilitates the translation of competence into measurable effectiveness outcomes. This focus not only closes a critical gap in current management literature but also offers practical insights for leadership development, particularly in resource-constrained and team-dependent sectors such as SMEs in the oil and gas industry

Operationalisation of Managerial Effectiveness Measures

In the context of SME survival in a developing nation like Nigeria, managerial effectiveness plays a fundamental role. “Results-oriented,” dimension underscores the importance of setting and achieving goals. In Nigeria's challenging business environment, SMEs must be laser-focused on measurable outcomes to navigate economic uncertainties. “Efficient task organisation,” dimension is vital in a resource-constrained environment. SMEs must optimise their processes and timeframes to ensure successful outcomes while managing limited resources effectively. “Teamwork,” dimension highlights the significance of collaboration. In Nigeria's diverse and dynamic market, SMEs must promote teamwork to leverage the collective strengths of their workforce. "Relationship-building" dimension is essential for navigating complex regulatory and social landscapes. Establishing positive connections with stakeholders is key for SMEs to thrive in Nigeria's developing business ecosystem.

In summary, these four dimensions of managerial effectiveness are essential for SMEs in Nigeria, helping them not only survive but also thrive in a challenging and rapidly evolving environment. Each of these dimensions are operationalised as discussed further.

Results-Oriented Dimension

Managers must be skilled at setting clear and achievable goals and objectives (Jones & George, 2016). This involves understanding the organisation's strategic direction and breaking it down into actionable targets. Again, managers should be adept at tracking progress toward

goals, assessing performance, and making adjustments when necessary (David, 2011). This includes the ability to measure outcomes and evaluate whether they align with the established objectives. Also, effective decision-making is fundamental for achieving results. Managers need to make timely and informed decisions that align with organisational goals. Another aspect of task-oriented effectiveness is planning and strategy development and implementation. Managers should be capable of developing plans and strategies that outline how to reach the desired results. This involves resource allocation and risk assessment. Furthermore, problem-solving is inevitably one of the areas requiring task-oriented managerial effectiveness, because challenges and obstacles arise when pursuing goals. Managers should be skilled at identifying issues and finding creative solutions to overcome them. Again, managerial effectiveness is achieved through clear communication, which is essential for ensuring that everyone understands the goals, expectations, and progress. Managers should be able to articulate their vision and provide regular updates to changes. This measured variable of ME focus on the following: (1) manager setting clear and achievable goals and objectives each team, (2) manager effectively tracking progress toward goals and adjusts strategies when necessary, (3) manager making timely and informed decisions that align with organisational goals, and (4) manager communicating goals, expectations, and progress to the team

Efficient Task Organisation Dimension

Managers need excellent time management skills to organise tasks effectively within specified timeframes. This includes setting priorities and allocating time appropriately. Also, delegating tasks to the right team members is fundamental for efficiency. Thus, managers should know how to distribute responsibilities based on team members' strengths and abilities. Furthermore, efficient task organisation often involves resource optimisation such as budgets, materials, and personnel. Managers must allocate resources wisely to achieve optimal outcomes. It is equally important to drive effectiveness through the knowledge of project

management methodologies and tools that can help managers to streamline tasks and ensure successful project completion. This measured variable of ME focused on: (1) manager prioritising tasks and allocate time effectively to ensure efficient task organisation within specified timeframes, (2) manager delegating tasks to the appropriate team members based on their strengths and abilities, (3) manager allocating resources such as budgets, materials, and personnel wisely to achieve optimal outcomes in task organisation, and (4) manager is knowledgeable in the utilisation of project management methodologies and tools to streamline tasks and ensure successful project completion.

Teamwork Dimension

Effective leadership is essential for promoting teamwork. This encompass qualities such as a collaborative spirit, a desire for active involvement, and effective leadership abilities (Al-Rawi, 2008). Managers should lead by example, inspire, motivate, and provide guidance to team members. This measured variable of ME focus on: (1) manager effectively leads by example to promote teamwork in our workplace, (2) manager inspires and motivates me and my colleagues to work collaboratively as a team, (3) manager provides clear guidance and direction to help our team achieve its goals, and (4) manager demonstrates shared leadership behaviour in promoting teamwork.

Relationship-Building Dimension

Conflicts may arise within teams. Managers should be skilled at resolving conflicts constructively and promoting a positive team atmosphere. Strong communication skills, including active listening, are critical for building and maintaining effective relationships with team members and colleagues. Understanding the emotions and perspectives of others is crucial for building strong working relationships. Managers with high emotional intelligence can relate to others more effectively. Managers should encourage and facilitate collaboration among team members. They should promote an environment where everyone's contributions

are valued. In diverse teams, managers should be culturally competent to understand and appreciate different cultural backgrounds and perspectives. This measured variable of ME focus on: (1) manager effectively resolves conflicts within our team, (2) manager actively listens to team members and colleagues when addressing issues or concerns, (3) manager demonstrates a high level of emotional intelligence when interacting with team members and colleagues, and (4) manager promotes and facilitates collaboration among team members, ensuring that employee's contributions are valued.

Table 2.2, below present the operationalised measurement variables of managerial effectiveness. As discussed in the previous section, managerial effectiveness is measured within the following contexts including the ability to set and achieve goals, efficiently organise tasks, and promote teamwork and positive relationships with others. The 5-scale Likert measurement criteria for managerial effectiveness is defined as follows: The definition of the ratings are as follows: *Strongly Disagree (1), Disagree (2), Neutral (3), Agree (4), Strongly Agree (5)*. The number "5" is the highest rating for each question.

Table 2.2

Operationalised measurement variables for managerial effectiveness

Measured Variable	Operationalised Questions
Results-Oriented Dimension	<ol style="list-style-type: none"> 1. My manager sets clear and achievable goals and objectives each team. 2. My manager effectively tracks progress toward goals and adjusts strategies when necessary. 3. My manager makes timely and informed decisions that align with organisational goals. 4. My manager communicates goals, expectations, and progress to the team
Efficient Task Organisation Dimension	<ol style="list-style-type: none"> 1. My manager prioritises tasks and allocate time effectively to ensure efficient task organisation within specified timeframes. 2. My manager delegate tasks to the appropriate team members based on their strengths and abilities.

	<ol style="list-style-type: none"> 3. My manager allocates resources such as budgets, materials, and personnel wisely to achieve optimal outcomes in task organisation. 4. My manager is knowledgeable in the utilisation of project management methodologies and tools to streamline tasks and ensure successful project completion.
Teamwork Dimension	<ol style="list-style-type: none"> 1. My manager effectively leads by example to promote teamwork in our workplace. 2. My manager inspires and motivates me and my colleagues to work collaboratively as a team. 3. My manager provides clear guidance and direction to help our team achieve its goals. 4. My manager demonstrates shared leadership behaviour in promoting teamwork.
Relationship-Building Dimension	<ol style="list-style-type: none"> 1. My manager effectively resolves conflicts within our team. 2. My manager actively listens to team members and colleagues when addressing issues or concerns. 3. My manager demonstrates a high level of emotional intelligence when interacting with team members and colleagues. 4. My manager promotes and facilitates collaboration among team members, ensuring that employee's contributions are valued.

Theoretical Framework on Team Cohesion

Researchers on the concept have offered some definitions of team cohesion. However, earlier definitions focused on group cohesion. In this study, the influence of managerial competence on team cohesion is investigated through social comparison theory (Festinger, 1954). The Social Comparison Theory, proposed by Leon Festinger in 1954, suggests that individuals determine their own social and personal worth by comparing themselves to others. According to this theory, people engage in social comparisons as a way to evaluate their opinions, abilities, and attributes in order to gain a better understanding of themselves and their position within a social context. These comparisons can occur both upwards (comparing oneself to those who are perceived as better) and downwards (comparing oneself to those who are perceived as worse).

While some individuals measure their circumstances against those of close colleagues, others broaden their view—drawing comparisons with peers in different organisations, industries, or even across national borders (Buchanan & Huczynski, 2017). Thus, social differentiation within any work group can negatively influence cohesion, as suggested in the literature (Chiniara & Bentein, 2018), as it can lead to unhealthy competition (Robbins & Judge, 2024). Festinger's theory is built upon the idea that humans have a natural drive to evaluate themselves and their abilities, and one of the most effective ways to do this is by comparing themselves to others.

Although social comparison can have positive effects, such as motivation for self-improvement, it can also lead to negative impacts on team performance in Small and Medium Enterprises (SMEs). This is because, most workers in SMEs are directly related to the owners (Agwu & Emeti, 2014), hence those who are not privileged to have this relationship might feel cheated always, thus destroying the cohesiveness in the team. Competent managers must promote a collaborative work culture through effective communication of goals, provide clear directions, and support the cohesiveness within the team (Buchanan & Huczynski, 2017). This promotes a positive work environment, encourages collaboration, and enhances team cohesion, and team members feel valued and motivated to work together towards shared objectives, leading to improved coordination, cooperation, and synergy within the team. This approach can lead to the evolution of self-managing teams (Buchanan & Huczynski, 2017).

Ultimately, the competency of managers contributes to the creation of a cohesive team that performs at its best and achieves collective success. Salas et al. (2015) propose that the productivity of a workforce is influenced by both task cohesion and social cohesion among team members. Social cohesion can be promoted through the development of social identity, as explained in the literature (Forsyth, 2010), based on the social cognitive theory (Bandura, 1997). It is important for SMEs to recognise the significance of task and social cohesion, as

well as the role of social identity, in driving productivity and overall success. By investing in strategies that promote these elements, SMEs can cultivate a cohesive and high-performing workforce that contributes to their long-term competitiveness and growth. Ensuring strong cohesion within a team is essential for maximising its effectiveness and performance.

Consequently, researchers have directed their efforts toward understanding ways to improve team cohesion. Yet, the definition of cohesion varies inconsistently in existing literature. Inconsistencies in both the definition and measurement of cohesion create challenges in comparing research findings across studies. Salas et al. (2015), suggests defining cohesion by considering both task and social sub-dimensions and measuring both through behavioural and attitudinal operationalisations. The authors recommend incorporating both individual and team-oriented items, emphasising that team-level analyses are the most effective approach. A team is defined in the literature (Salas et al., 2017), as a set of two or more individuals that adaptively and dynamically interacts through specified roles as they work towards shared and valued goals. Consequently, enhanced team cohesion can boost managerial effectiveness by promoting productivity and smooth communication, enabling efficient task completion, and promoting a positive work environment, thereby maximising overall organisational performance (Beal et al., 2003).

In the context of Small and Medium Enterprises (SMEs), the implications of strong team cohesion are vital for both growth and survival. For SMEs aiming for growth, a cohesive team can translate to increased productivity and innovation through championing “trust” as a norm in the organisation (Buchanan & Huczynski, 2017). When employees work together seamlessly, they can efficiently collaborate on tasks and projects, leading to the development of new ideas and solutions. Effective communication within a tightly-knit team also means that information and feedback can flow freely, enabling the company to adapt swiftly to market changes and customer demands. Moreover, a positive work environment resulting from strong

cohesion can enhance employee morale and job satisfaction, reducing turnover rates and ensuring continuity in expertise.

Conversely, for SMEs facing the risk of closure, furthering team cohesion becomes important as well. A united team can better navigate challenges and crises, pooling their skills and efforts to find solutions. This collective resilience can be a determining factor in overcoming obstacles, potentially steering the business away from the brink of failure. In corroborating this above position, Al-Rawi (2008) suggests that the cohesiveness of a team was closely linked to team members' positive commitment to organisational values but a negative commitment to performance. The implication for managerial competence, as suggested by Al-Rawi (2008), underscores the importance of nurturing team cohesion.

When a team is cohesive, it positively influences team members' commitment to organisational values. However, while cohesion can strengthen interpersonal relationships and team satisfaction, excessive cohesion may lead to negative commitment to performance by promoting conformity, discouraging constructive criticism, and prioritising harmony over productivity (Buchanan & Huczynski, 2017; Forsyth, 2010, 2018). In such scenarios, the desire to maintain unity can result in groupthink, resistance to innovation, and ultimately a decline in effectiveness. This necessitates the need for managers to strike a balance between promoting a strong team bond while ensuring a focus on individual and collective performance goals. This insight emphasises the complexity of team dynamics and stresses the need for managers to navigate these intricacies effectively to enhance both team cohesion and performance outcomes.

Thus, within the SME landscape, the establishment and maintenance of robust team cohesion, as defined by comprehensive parameters, not only enhance managerial effectiveness but also serve as a linchpin for growth and a shield against demise. By embracing cohesive teamwork, SMEs can fortify their internal structure, promote innovation, and weather

uncertainties, thus contributing significantly to their sustainability and success in the business ecosystem.

In examining the relationship between managerial competence and team cohesion, the study employs the Social Comparison Theory (Festinger, 1954). This theory posits that individuals evaluate their social and personal worth by comparing themselves to others. Through social comparisons, people evaluate their opinions, abilities, and traits to better understand their position in a social context, such as becoming a member of a team in the workplace. These comparisons can be upward (against those perceived as superior) or downward (against those perceived as inferior). Consequently, social distinctions within workgroups impact cohesion negatively (Chiniara & Bentein, 2018). The pressure for uniformity of norms within a team is driven by the dominant mode of associability. This mode is driven by task and social team bonding activities (Salas et al., 2015).

Festinger's theory is rooted in the natural human inclination to assess themselves by comparing their abilities with others, a process that, while motivating self-improvement, can also adversely affect team performance in Small and Medium Enterprises (SMEs). Competent managers play a significant role in promoting a collaborative work culture by communicating goals clearly, providing precise instructions, and supporting team development. This approach nurtures a positive work environment, encourages collaboration, and strengthens team cohesion. In such an atmosphere, team members feel valued and motivated, working collectively toward shared objectives, thereby enhancing coordination, cooperation, and synergy within the team. Ultimately, managerial competency contributes significantly to creating a unified team that operates at its optimal level, achieving collective success.

Two other theories that are useful in evaluating the social and interactional belongingness of team members are the social identity and self-categorisation theories (Tajfel, 1978; Tajfel & Turner, 1979). Social identity theory and self-categorisation theory propose that individuals

classify themselves into specific groups like nationality, gender, or sports teams. Social Identity Theory was initially introduced by Tajfel in 1978 and later expanded upon by Tajfel and Turner in 1979, and explores how these group affiliations shape interactions between different groups and impact an individual's self-perception (Tajfel, 1978; Tajfel & Turner, 1979). Connected to self-categorisation is how an individual assesses their own group. To form a favourable opinion of their own group, individuals participate in comparing their group with others through social comparison processes. By adopting social identity theory and self-categorisation theory, SMEs can build a strong sense of identity and belonging among their casual employees, leading to increased loyalty, teamwork, and productivity. Additionally, these theories can aid in managing labour-intensive processes more effectively by empowering employees and reducing resistance to change. Creating a positive social identity within the workplace can thus positively impact various aspects of SME operations.

Salas et al. (2015) posit that a workforce's productivity is influenced by both task cohesion and social cohesion among team members. Social cohesion can be nurtured by developing social identity, as outlined in the literature (Forsyth, 2018). based on social cognitive theory (Bandura, 1986), which states that people learn from observing others, incorporating social influences, cognition, and behaviour to shape attitudes and actions. Therefore, managers of SMEs must recognise the importance of task and social cohesion, as well as the role of social identity, in driving productivity and overall success. By investing in strategies that promote these elements, SMEs can cultivate a cohesive and high-performing workforce, ensuring their long-term competitiveness and growth. This study examines the dimensions of team cohesion based on the outcome of the comparisons among the Social Comparison Theory, Social Cognitive Theory, Social Identity Theory, and Self-Categorisation Theory.

Table 2.3*Theoretical Framework for team Cohesion*

Team Cohesion Related Theory	Conceptual Definition	Implication for SMEs
Social Comparison Theory (Festinger, 1954)	People evaluate themselves by comparing with others to assess abilities, traits, or opinions, which has the ability to impact self-esteem and motivation.	<i>Positive:</i> Can promote team cohesion by encouraging positive comparisons, boosting morale, collaboration, and mutual support. <i>Negative:</i> Can lead to envy, resentment, and reduced collaboration, harming team cohesion and overall productivity.
Social Cognitive Theory (Bandura, 1986)	People learn from observing others, incorporating social influences, cognition, and behaviour to shape attitudes and actions.	<i>Positive:</i> Can encourage team cohesion in SMEs by promoting shared learning, positive role modelling, and effective communication skills, enhancing collaboration. <i>Negative:</i> May lead to unhealthy competition, imitation of counterproductive behaviours, and a lack of authenticity, undermining cohesion.
Social Identity Theory (Tajfel & Turner, 1979)	Individuals classify themselves and others into social groups, influencing behaviour, attitudes, and intergroup relations.	<i>Positive:</i> Can promote team cohesion in SMEs by encouraging a strong shared identity, harmony, trust, and cooperation among members. <i>Negative:</i> May lead to intergroup conflicts, biases, and exclusion, hindering teamwork and collaboration in SMEs.
Self-Categorisation Theory (Tajfel & Turner, 1979)	Individuals perceive themselves based on group membership, influencing behaviour, identity, and intergroup relations in social contexts.	<i>Positive:</i> Can promote a shared team identity, supporting unity, cooperation, and mutual understanding among members, enhancing cohesion in SMEs. <i>Negative:</i> May lead to self-exclusive behaviours, prejudice, and conflicts between different group identities, disrupting team cohesion.

From the findings in Table 2.3 the key similarities across Social Comparison Theory, Social Cognitive Theory, Social Identity Theory, and Self-Categorisation Theory in enhancing team cohesion include:

Shared Identity: All theories emphasise the importance of a shared identity or group membership in promoting cohesion.

Positive Interactions: They highlight the significance of positive interactions among team members, leading to trust, cooperation, and unity.

Social Learning: They acknowledge the role of observing and learning from others within the social context, impacting attitudes and behaviours.

Communication: Effective communication and understanding among team members are central to leveraging these theories for enhancing cohesion.

Influence on Behaviour: These theories recognise that social perceptions and categorisations influence individual and collective behaviours within teams.

Interconnectedness: They all recognise that individual actions and attitudes are influenced by social context, emphasising the interconnection between individuals and their teams.

Intergroup Relations: These theories consider the dynamics of intergroup relations, which can either enhance cohesion (through positive intergroup interactions) or create divisions (through negative intergroup behaviours).

Hence, team cohesion is deeply rooted in the psychological processes that govern how individuals perceive themselves in relation to others. A central theme across Social Identity Theory, Self-Categorisation Theory, Social Comparison Theory, and Social Cognitive Theory is the importance of shared identity in advancing unity within teams. According to Social Identity Theory, individuals derive self-esteem from their group memberships, which motivates them to identify with and support their in-group. Self-Categorisation Theory builds

on this by explaining how people shift between personal and social identities, adopting group norms and behaviours when they see themselves as part of a collective. Social Comparison Theory adds that individuals often evaluate their own abilities and opinions through comparisons with others, especially within cohesive groups where upward comparisons can inspire growth rather than rivalry. Meanwhile, Social Cognitive Theory emphasises how shared goals and mutual modeling reinforce a sense of collective identity, promoting cooperation through observational learning.

Equally important for team cohesion are *positive interactions* among members, which these theories collectively highlight as essential for building trust and cooperation. SIT suggests that favourable interactions among in-group members strengthen feelings of belonging and reduce perceived differences, while Self-Categorisation Theory explains that strong identification with the group leads individuals to interpret others' actions through a collective lens rather than individual motives. Social Cognitive Theory emphasises reciprocal determinism—the idea that behaviour, personal factors, and the environment influence each other—showing how supportive environments foster positive feedback loops of collaboration. Social Comparison Theory further illustrates how constructive comparisons in a supportive setting can motivate team members without inciting competition, reinforcing a cooperative culture.

The process of *social learning* also plays a significant role in shaping attitudes and behaviours that contribute to team cohesion. Social Cognitive Theory directly addresses this through the concept of observational learning, where individuals model the actions, attitudes, and emotional responses of others. This modeling helps spread collaborative practices and reinforces group norms. Social Identity Theory supports this by showing that individuals are more likely to adopt behaviours modelled by in-group members who represent the group's ideals. SCT adds that when people internalise group prototypes, they align their behaviours

with those standards, enhancing conformity and unity. Social Comparison Theory contributes by indicating that individuals learn about appropriate performance and behaviour by comparing themselves with others, helping integrate new members and sustain team culture over time.

At the heart of these dynamics lies effective *communication*, which serves as a critical mechanism for leveraging these theories to enhance cohesion. Social Identity Theory argues that communication strengthens in-group identification by reinforcing shared values and meanings. Self-Categorisation Theory shows that language and discourse shape how individuals categorise themselves and others, with inclusive communication fostering a sense of “we” rather than “I.” Social Cognitive Theory highlights the role of verbal persuasion and feedback in influencing self-efficacy and behaviour—both crucial for team functioning. Social Comparison Theory notes that communication provides the information necessary for individuals to make meaningful comparisons, which can either motivate or alienate depending on tone and context. Thus, open, respectful, and meaningful dialogue not only coordinates efforts but also deepens mutual understanding and respect.

These theories also converge on the idea that social perceptions and categorisations significantly influence both individual and collective behaviours within teams. Social Identity Theory demonstrates how identification with a group affects behaviour, prompting individuals to act in ways that benefit the group and uphold its image. Self-Categorisation Theory explains that shifts in identity lead individuals to align their actions with group norms rather than personal preferences. Social Comparison Theory reveals that individuals adjust their behaviour based on how they measure up against others, striving for competence and acceptance. Social Cognitive Theory links behaviour to cognitive and environmental influences, showing how social contexts shape goal-setting, effort, and persistence. Together, they illustrate how deeply embedded individuals are in their social environments, and how these contexts shape their contributions to team dynamics.

A key insight across all four theories is the interconnectedness between individuals and their teams. Social Identity Theory and Self-Categorisation Theory both emphasise that people's thoughts, emotions, and behaviours are shaped by their relationship to the group. Social Cognitive Theory describes human behaviour as emerging from an interaction between personal factors, behaviour, and the environment—an ongoing exchange that reflects the fluid nature of social systems. Social Comparison Theory underscores how individuals continuously monitor and adapt based on their surroundings, highlighting the dynamic interplay between personal and social forces. This interconnectedness means that changes in one individual or subgroup can ripple through the entire team, affecting cohesion and performance at multiple levels.

Finally, these theories also consider the impact of *intergroup relations* on team cohesion, particularly in diverse or multi-team settings. Social Identity Theory explains how favouritism toward in-groups and discrimination against out-groups can either strengthen internal unity or create divisive boundaries if left unchecked. Self-Categorisation Theory shows how broader, superordinate identities—such as identifying with an organisation—can be used to reduce conflict and promote cooperation across different teams. Social Comparison Theory indicates that competitive intergroup dynamics can drive innovation and motivation, though they may also breed hostility if comparisons become overly adversarial. Social Cognitive Theory addresses how modeling and vicarious experiences across groups can build empathy and shared understanding. Managing these intergroup dynamics effectively is therefore essential for maintaining overall team cohesion and ensuring smooth collaboration across different units.

The integration of the insights from Social Comparison Theory, Social Cognitive Theory, Social Identity Theory, and Self-Categorisation Theory offered a comprehensive

understanding of the mechanisms that underpin team cohesion. These theories collectively highlight the critical roles of shared identity, positive interactions, social learning, communication, behavioural influence, interconnectedness, and intergroup dynamics in shaping how teams function and succeed together.

Thus, from the discussion so far, the effectiveness of the team can be related to productivity, socialisation and competence enhancement. These three aspects of team effectiveness resonate with the three dimensions of Hackman's team effectiveness theory, including productive output, socialising process and group experience (Cobb & Hackman, 2003; Hackman, 2002). Hackman's team effectiveness studies provide valuable insights into the dynamics of work teams. Each of these assertions are discussed as follows.

First, teams with harmonious members perform better. This assertion suggests that teams where members collaborate smoothly without frequent conflicts tend to perform better (Maj, 2023). When team members work together harmoniously, they can focus on their tasks and goals without being distracted by interpersonal issues. This cohesion often leads to increased productivity, better problem-solving, and overall higher performance. Thus, The assertion that "teams with harmonious members perform better" aligns closely with the psychological mechanisms discussed in the theories of team cohesion. When team members collaborate smoothly and minimise interpersonal conflict, they are more likely to share a strong sense of shared identity—a core idea in both Social Identity Theory and Self-Categorisation Theory. This shared identity encourages mutual trust and commitment, allowing individuals to focus on collective goals rather than personal differences.

Moreover, harmonious interactions reflect positive intergroup dynamics and effective communication, which are essential for reinforcing group norms and maintaining unity. As explained through Social Cognitive Theory, positive social environments promote observational learning and reciprocal support, encouraging prosocial behaviours that enhance

team performance. In such cohesive teams, members model effective strategies from one another, leading to improved problem-solving and innovation.

Additionally, when conflicts are minimised, it suggests that constructive social comparisons are taking place—where team members engage in upward comparisons to motivate self-improvement rather than fostering rivalry or resentment. This is consistent with Social Comparison Theory, which emphasises the role of comparison processes in shaping motivation and self-evaluation within groups. Ultimately, harmonious team functioning reflects strong interconnectedness, where individual actions are aligned with group objectives. This alignment not only enhances task focus and productivity but also supports a unified team culture—one that thrives on mutual respect, shared purpose, and collaborative success.

Second, leadership style influences team dynamics. According to this assertion, the behavioural style of the team leader significantly impacts team dynamics. To understand leader-follower dynamics, the theory of followership developed in the literature (Kelley, 1992), can be used to explain the leader-follower dynamics that influence a group. In this theory, the researcher identifies five types of followership behaviour. The “conformist” followers are active, highly energised, and devoted to the leader; they do not question the leader’s decisions and are ready to defend them. The “passive group” lacks enthusiasm and commitment, often likened to “sheep” who follow others without question. The “pragmatic group” are neither active nor passive, conforming nor independent, and tend to adjust to situations without a consistent followership style. The “alienated group” are not committed, are only partially involved, and maintain a strong sense of independence from the leader. Finally, the “exemplary group” are actively engaged in the group’s activities and are willing to question or oppose the leader’s decisions when necessary.

Specifically, the contrast between an authoritative (directive) leadership style and a democratic (participative) style is essential. An authoritative leader makes decisions

independently and directs team members, while a democratic leader involves the team in decision-making processes. The choice of leadership style can shape how team members interact, make decisions, and collaborate, thereby affecting the overall effectiveness of the members. The leadership domain of managerial competence is needed to provide shared leadership at this juncture. Furthermore, a recent study by Kan (2024)) examined high-performance teams across various industries and found that transformational leadership significantly enhances team innovation. Leaders who inspire and motivate their teams foster increased participation, collaboration, and innovation. The research emphasises that different leadership styles stimulate varied behavioural, emotional, and cognitive responses from team members, thereby influencing overall team performance and development

Third, larger teams benefit from more diverse resources: This assertion states that larger teams outperform smaller teams because they can leverage a greater pool of resources (Wuchty et al., 2007). Larger teams have access to a diverse set of skills, knowledge, and perspectives from their members. This diversity allows for a richer exchange of ideas and approaches, leading to enhanced problem-solving and creativity. The varied skills within a larger team can complement each other, leading to a more comprehensive and efficient approach to completing tasks and achieving goals. This highlights the critical role of effective leadership in harnessing team diversity to maximise performance and innovation.

Fourth, and finally, team Performance deteriorates over time with intact membership. The fourth assertion suggests that teams with unchanged, stable memberships over an extended period might experience a decline in performance. Hackman's work on team effectiveness (Hackman, 2002), emphasises that teams with long-term stability in membership can experience diminishing returns in performance due to group cohesion and potential lack of fresh perspectives. Hackman suggests that while team stability can have initial benefits, over time, it may lead to complacency and reduced performance. This decline occurs because team

members may become complacent, less vigilant about environmental changes, and forgiving of each other's mistakes. In other words, the team's cohesion might lead to a lack of critical evaluation and necessary adaptation. New challenges might not be met with the same level of enthusiasm and innovation.

Research in the literature (LePine et al., 2008), has shown that the relationship between teamwork processes and team performance varies based on factors like task interdependence and team size. Specifically, the effectiveness of teamwork processes in influencing team performance is influenced by how interdependent the tasks are and the size of the team. Larger teams or tasks requiring greater interdependence may experience different dynamics in how teamwork processes translate into performance outcomes. Therefore, it is important for teams to periodically introduce new perspectives or restructure to maintain their effectiveness and prevent stagnation. Consequently, it is important for team members to swap teams and roles, as a way of improving diverse work experience and social bonding within an organisation.

In another recent study conducted by Umuteme (2024), the author suggests that the socialisation process and productive output are significant factors contributing to team effectiveness, which in turn influences positive productivity outcomes. The study's findings suggest that social cohesion, built through effective socialisation processes, creates a supportive and communicative environment within the team. This positive social atmosphere contributes to team effectiveness by promoting trust, collaboration, and conflict resolution. Simultaneously, task cohesion, represented by the team's ability to generate productive output, ensures that the team's efforts are channelled toward achieving specific goals. In essence, the study demonstrates that both social and task cohesion are integral components of team effectiveness. Social cohesion provides the emotional and interpersonal support necessary for effective collaboration, while task cohesion ensures that this collaboration translates into tangible, high-quality outcomes. Recognising and nurturing both social and task cohesion

within teams is significant in promoting a productive work environment and achieving positive productivity outcomes.

Dimensions of Team Cohesion

The measures of task cohesion and social cohesions in relation to the competencies and effectiveness of managers discussed earlier are presented as follows. In this study, six measures of task cohesion are examined and defined as follows:

Task Cohesion

Communication is marked by its frequency and quality, and stands as a cornerstone measure of task cohesion. Effective and open communication among team members, encompassing the sharing of information, asking questions, and providing feedback, is essential for promoting task cohesion. Studies emphasise that task cohesion is not just about the frequency of communication, but also its approach, practical significance and quality (Marlow et al., 2018). Effective communication involves not only sharing information but also ensuring that it is received, understood, and acted upon appropriately. Higher-quality communication typically leads to better alignment on objectives, contributing to stronger task cohesion through interdependency (Gully et al., 2002). Thus, frequent and good quality effective communication strengthens task cohesion by aligning team members around shared goals, enhancing coordination, and reducing misunderstandings. Clear and structured exchanges can build trust, promote accountability, and ensure collective team-efficacy. Teams that prioritise meaningful communication are more likely to stay focused, adapt quickly, and perform cohesively under varying conditions and challenges (Marlow et al., 2018).

Goal Clarity emerges as an essential factor, with a focus on measuring the level of clarity and understanding team members possess of the task or project goals. Clear goals contribute significantly to aligning individual efforts and providing a sense of cohesion among team members (Aga, 2016). When team members have a shared and precise understanding of

objectives, it reduces ambiguity and enhances coordination. Empirical evidence shows that goal clarity positively predicts team effectiveness through self-management and information-seeking (van der Hoek et al., 2018) and cultivates better collaboration and adaptation in decision-making settings through information sharing (van Knippenberg et al., 2015).

Role Clarity is another vital aspect, emphasising the need to assess how well team members understand their roles and responsibilities within the task. Role clarity is essential for effective team functioning, as it ensures that each member comprehends their specific responsibilities and how they contribute to the team's objectives. Clear delineation of roles can enhance coordination, reduce task overlap, and cultivate accountability, leading to improved performance and job satisfaction. The following studies have shown that when team members have a clear understanding of their roles, they are more engaged and productive. When roles are well understood, teams exhibit greater efficiency, reduced conflict, and improved task execution (Bray & Brawley, 2002). Clear role expectations also enhance motivation and engagement by reducing uncertainty and reinforcing accountability (Lynn, 2015).

Cooperation and Collaboration are evaluated to gauge the extent to which team members work together, offer mutual assistance, and collaborate effectively. Cooperation and collaboration are fundamental to effective team performance, as they involve team members working together, providing mutual assistance, and leveraging collective strengths (Achebelema & Achebelema, 2021; Salas et al., 2017; Schmutz & Manser, 2013). This involves examining how team members share resources, support each other, and engage in joint problem-solving. The literature (Assbeihat, 2016), emphasises that collaborative efforts among team members lead to enhanced productivity and efficiency, as working collectively yields better results than individual efforts. Hence, cooperation and collaboration reflect the extent to which team members work together, support each other, and contribute to shared goals. These concepts emphasise mutual assistance, resource sharing, and participative

problem-solving. Research so far highlights that when teams engage in collaborative practices, they are more likely to experience increased productivity, efficiency, and overall success

Trust and Support equally play a critical role in task cohesion. Measuring the level of trust and support among team members is important to team cohesion, as trust promotes psychological safety, encourages risk-taking, and enhances cooperation within the team. (Okros & Vîrgă, 2025) investigated the relationship between social support and employee thriving at work. Their research demonstrated that social support enhances hope, resilience, and optimism, which in turn promotes thriving at work. The study also emphasised the role of a psychosocial safety climate in reinforcing these positive outcomes. Fyhn et al. (2023) examined how the consistency of psychological safety perceptions within teams affects performance. The findings indicate that teams with uniformly high psychological safety outperform those with inconsistent safety perceptions. These research outcomes highlight the importance of a shared sense of trust and support among team members.

Conflict Resolution is the final measure studied, and it focuses on how conflicts and disagreements are managed within the team. Assessing the ability of the team to resolve conflicts constructively and reach mutually beneficial solutions is key to maintaining a positive team atmosphere and contributing to overall task cohesion (Adham, 2023). Effective conflict resolution is essential for maintaining team cohesion and performance, as unresolved conflicts can hinder collaboration and productivity in tasks requiring higher levels of coordination, communication, and shared understanding (De Dreu & Weingart, 2003). Also, De Dreu and Weingart (2003) emphasise the need to separate task conflict separate from relationship conflict. Research indicates that teams employing constructive conflict resolution strategies, such as open communication and collaborative problem-solving, tend to have higher levels of trust and performance (Jehn & Mannix, 2001).

Social Cohesion

Social cohesion refers to the degree of connectedness, trust, and mutual support among individuals within the team (Salas et al., 2015). In this study, six distinct measures of social cohesion were investigated, each providing insight on different aspects of team dynamics and interpersonal relationships as follows:

Social Interaction: The frequency and quality of social interactions among group members were examined, encompassing activities such as conversations, social events, and team-building exercises. This measure aimed to gauge the extent to which individuals actively engaged in various social endeavours. In organisational and team-based work environments, the frequency and quality of interpersonal exchanges, such as casual conversations, participation in social events, and involvement in team-building exercises, are often indicative of the social health of the team. These interactions contribute not only to individual well-being but also to collective identity and mutual trust among group members (Forsyth, 2018). Furthermore, engagement in structured and informal social activities can mitigate interpersonal conflict and promote a supportive environment, which is necessary in performance-oriented settings by facilitating the sharing of information, and enhancing collaborative problem-solving (Kloppenborg & Petrick, 1999; Salas et al., 2017; Tuckman, 1965).

Trust and Belongingness: The study delved into the level of trust and the sense of belongingness among group members. It sought to quantify how comfortable, accepted, and valued individuals felt within the group, emphasising the importance of these emotional dimensions in furthering cohesion. Trust and belongingness are foundational elements in sustaining group cohesion and effectiveness. Studies emphasise that when individuals feel accepted, respected, and emotionally safe within a group, their sense of belonging increases, which in turn enhances interpersonal trust and collective engagement (Chen et al., 2025). Belongingness contributes to individuals feeling valued and understood, which strengthens

emotional bonds and encourages open communication. Employee engagement showed a positive link with individual morale, task-related performance, behaviours beyond formal roles, and overall organisational effectiveness, with the strongest evidence supporting its impact on task performance (Bailey et al., 2017). Together, these elements create a psychologically safe environment that promotes collaboration, motivation, and group identity. In team-based settings, respectful engagement has been linked to enhanced creative behaviours (Carmeli et al., 2015). Understanding and nurturing these emotional dimensions are essential for any team striving for long-term cohesion and success.

Shared Values and Norms: This measure focused on the alignment of beliefs, attitudes, and behaviours, contributing to the establishment of a common identity and reinforcing social cohesion. Shared values and norms play a critical role in shaping group identity (Schein, 2010; Spector, 2012) and advancing cohesion (Dinh & Salas, 2017; Salas et al., 2015). When individuals align their beliefs, attitudes, and behaviours, it not only reinforces a collective identity but also strengthens group solidarity and cooperation, such that information from the in-group is held with higher regard than when it is coming from outside the group (Smith & Louis, 2009). The alignment of these elements (beliefs, attitudes, and behaviours) is essential for minimising conflicts and ensuring effective communication, which are key factors in maintaining group harmony (Grossman et al., 2022). Additionally, a strong sense of shared identity and norms has been linked to higher group performance and mutual support among members (Kozlowski & Ilgen, 2006; Smith & Louis, 2009).

Empathy and Support: This measure aimed to capture the willingness of individuals to listen, understand, and provide emotional or practical assistance when needed, in promoting a supportive work environment. Empathy is a social competence exercised by managers in problem-solving and relationship management, and defined as the ability to understand and share the feelings of others (Northouse, 2019). When members of a team are willing to listen,

offer emotional understanding, and provide both emotional and practical assistance, it creates a nurturing environment that encourages collaboration and trust, and can help retain talents within the team (Buchanan & Huczynski, 2017). Such behaviours contribute significantly to the development of psychological safety, where individuals feel comfortable taking risks and sharing ideas without fear of judgment (Edmondson, 1999). Furthermore, supportive communication climate have been linked to improved team performance, reduced conflict, and ultimately enhances cohesion (Buchanan & Huczynski, 2017). Therefore, a team characterised by high empathy and support is more likely to experience long-term success and resilience in facing challenges.

Inclusion and Diversity: The study explored the inclusivity and acceptance of diverse perspectives, backgrounds, and identities within the team. It measured the extent to which individuals from different backgrounds felt included and respected, emphasising the role of diversity in enhancing overall social cohesion. Inclusion refers to the active, intentional, and ongoing effort to ensure that all individuals, regardless of race, gender, culture, or other differences, feel respected, valued, and fully integrated into the group (Robbins & Judge, 2024). Measuring how individuals from diverse backgrounds perceive their inclusion offers insight into the cross-cultural competence of team members and the feeling of psychological safety. In proposing a “diversity science” high levels of inclusion have been linked to stronger feelings of belonging, which directly contribute to social cohesion and team effectiveness (Roberson, 2019). Additionally, diversity in professionalism and experiences brings a richness of thought that enhances creativity, problem-solving, and decision-making (Phillips, 2022). Thus, when members of a team feel that their unique ideological perspectives are genuinely welcomed and considered, it nurtures mutual respect, and strengthens social cohesion, and creating a more collaborative and high-performance oriented work environment.

Conflict Management: This has been defined in the literature (Robbins & Judge, 2024, p. 682) as, “the use of resolution and stimulation techniques to achieve the desired level of conflict.” Different types of conflicts exist, as discussed in Robbins and Judge (2024), including— dyadic conflict (between two people); dysfunctional conflict (conflict that hinders performance); functional conflict (conflict that improves its performance); task conflict (conflict relating to the content and goals of the task). Each of these conflict types must be managed effectively to enhance productivity. Hence, the ability of team members to handle conflicts and disagreements constructively was the focus of this measure and seen as the outcome of managerial competence. It encompasses the capacity to manage conflicts, promote understanding, and maintain positive relationships, contributing to the overall effectiveness of conflict resolution strategies within the team. Conflict is an inevitable part of interaction among team members in the workplace, but the way it is handled can significantly impact team cohesion and productivity (De Dreu & Weingart, 2003). Constructive conflict management involves open communication, active listening, and a focus on problem-solving rather than personal attacks or avoidance (Robbins & Judge, 2024). Teams that successfully navigate conflict are better able to promote mutual understanding, reduce tension, and maintain healthy interpersonal relationships. Ensuring that team members observe set norms within the organisation can minimise the occurrence of conflicts (Forsyth, 2018).

Research Gap Analysis on Team Cohesion in SMEs

The main gap is the need to rank the dimensions of both task and social cohesion that enhances the mediating influence of team cohesion on the direct relationship between managerial competence and managerial effectiveness. The literature discussed so far presents compelling empirical insights into task and social cohesion dimensions that underscore the need to rank their relative contributions in mediating the link between managerial competence and managerial effectiveness, which is a gap that has not been addressed. For instance, within

task cohesion, communication stands out as foundational, with both frequency and quality strongly linked to team alignment and efficiency (Marlow et al., 2018; Gully et al., 2002). However, goal clarity and role clarity offer distinct mechanisms by which teams can “self-organise,” minimise role ambiguity, and maintain accountability (Aga, 2016; Bray & Brawley, 2002; Lynn, 2015). While all dimensions promote cohesion, it remains empirically unclear which mostly links managerial inputs into effective team outputs.

Likewise, social cohesion encompasses multiple components, such as trust and belongingness, shared norms, empathy, and inclusion, that collectively sustain interpersonal synergy. Yet, the strength of their mediating influence varies. For instance, trust has been shown to significantly predict psychological safety and performance consistency (Fyhn et al., 2023; Chen et al., 2025), while empathy and support enhance idea-sharing and talent retention (Edmondson, 1999; Buchanan & Huczynski, 2017). However, their comparative weight in influencing the managerial competence-managerial effectiveness link remains understudied.

Although conflict resolution and collaboration feature across both task and social domains, their interplay with other cohesion dimensions in mediating managerial influence is undertheorised. This gap points to an important need to empirically rank cohesion dimensions not only by their presence but by their mediating effect in SMEs. Without this hierarchy, managerial competence may be below expectation, limiting the predictive power of cohesion models in practice. Addressing this gap offers a pathway to developing targeted strategies for enhancing managerial competence and effectiveness through high ranking dimensions of team cohesion.

Operationalisation of Team Cohesion Measures

The measures of team cohesion discussed above are summarised and operationalised as follows:

Task Cohesion: (i) Communication: Assess the frequency and quality of communication, including information sharing and feedback among team members; (ii) Goal Clarity: Measure the clarity and understanding team members have about project goals, ensuring alignment and promoting cohesion; (iii) Role Clarity: Evaluate team members' comprehension of their roles, reducing confusion and enhancing collaboration; (iv) Cooperation and Collaboration: Measure the extent of teamwork, mutual assistance, and joint problem-solving among team members. Collaboration is essential for preserving the active participation, favourable reactions, and effective communication that signify strong unity (Landy & Conte, 2009); (v) Trust and Support: Measure the level of trust and psychological safety within the team, essential for promoting cooperation and risk-taking; and (vi) Conflict Resolution: Evaluate how conflicts are managed within the team, focusing on constructive resolution and maintaining a positive team atmosphere.

Social Cohesion: (i) Social Interaction: Evaluate the frequency and quality of social interactions, such as conversations and team-building exercises; (ii) Trust and Belongingness: Measure the level of trust and sense of belonging among team members, furthering a supportive environment; (iii) Shared Values and Norms: Assess the alignment of beliefs and attitudes within the group, contributing to a shared identity and cohesion; (iv) Empathy and Support: Measure the willingness of team members to listen, understand, and provide assistance to one another; (v) Inclusion and Diversity: Evaluate the acceptance of diverse perspectives and backgrounds within the team, promoting inclusivity and respect; and (vi) Conflict Management: Assess how conflicts are handled within the team, emphasising constructive resolution and positive relationship maintenance.

Table 2.4, below present the operationalised measurement variables of managerial effectiveness. As discussed in the previous section, Team Cohesion is measured within the contexts task and social cohesion discussed earlier. The 5-scale Likert measurement criteria for

managerial effectiveness is defined as follows: *Strongly Disagree (1), Disagree (2), Neutral (3), Agree (4), Strongly Agree (5)*. The number “5” is the highest rating for each question.

Table 2.4

Operationalised measurement variables for Team cohesion

Measured Variable	Operationalised Questions
Task Cohesion Dimension	<ol style="list-style-type: none"> 1. Communication: How would you rate the frequency and quality of communication within the team, including information sharing and feedback among team members? 2. Goal Clarity: Team members understand and are aligned with the organisational goals. 3. Role Clarity: I am clear about my role within the team and the roles of other team members 4. Cooperation and Collaboration: Team members work together, assist each other, and engage in joint problem-solving activities. 5. Trust and Support: I trust my team members and feel psychologically safe to express my opinions and take risks within the team. 6. Conflict Resolution: Conflicts are effectively resolved within the team.
Social Cohesion Dimension	<ol style="list-style-type: none"> 1. Social Interaction: Team members engage in social interactions, such as casual conversations and team-building exercises. 2. Trust and Belongingness: I trust my team members, and I have strong sense of acceptance within the team. 3. Shared Values and Norms: I believe that the team members share common values and attitudes. 4. Empathy and Support: Team members are willing to listen, understand, and provide assistance to each other. 5. Inclusion and Diversity: I believe that diverse perspectives and backgrounds are accepted and respected within the team. 6. Conflict Management: Conflicts are effectively handled within the team.

Theoretical Framework on Uncertainty Management

Uncertainty Management Theory (UMT) provides insights into how individuals navigate uncertainty in interpersonal and intercultural contexts. It highlights the importance of information-seeking, communication behaviours, and cultural influences in managing uncertainty effectively. This theoretical strength of UMT is harnessed in this study by focusing on the moderating effect of role ambiguity on employee performance in small and medium-sized enterprises (SMEs), as supported in existing literature (Brashers, 2001).

Empirical findings suggest a negative correlation between role ambiguity and the innovation capabilities of team members (Maden-Eyiusta, 2021). The presence of role ambiguity within SMEs can be inferred from the nature of work structures in such organisations, as highlighted by Agwu and Emeti (2014). In these settings, employees often operate without clearly defined roles and responsibilities, leading to uncertainty regarding job expectations. Further research links role ambiguity to negative outcomes such as employee burnout and perceptions of abusive supervision (Wu et al., 2019).

From a theoretical standpoint, role ambiguity emerges within the framework of UMT, particularly regarding its implications for team performance and fairness in performance evaluations (Brashers, 2001). Selecting an appropriate communication channel is influenced by the anticipated degree of uncertainty and ambiguity in the message (Miles, 2012). This highlights how communication strategies are integral to role clarity.

This study also explores how role ambiguity and role conflict serve as moderating influences in the relationship between team cohesion and managerial effectiveness. Understanding this relationship is crucial, as team members are typically assigned specific tasks and goals, which underscore the importance of both task and social cohesion within workplace dynamics.

The literature draws attention to two significant organisational tensions: role conflict and role (Fichter, 2010; Palomino & Frezatti, 2016). These tensions may stem from organisational factors or from personal and interpersonal dynamics. Collectively, such factors shape how employees perceive their responsibilities and navigate their roles. A role refers to the expected behaviour of an individual in a given context (Miles, 2012). Role conflict arises when incompatible expectations exist within the same role (intra-role conflict) or across multiple roles (inter-role conflict). This study specifically investigates inter-role conflict, where employees are required to juggle multiple roles. Role ambiguity, by contrast, involves the uncertainty individuals experience regarding expected duties and responsibilities. It reflects a lack of clarity about one's tasks and expectations in an organisational context.

In SMEs, where work roles are often flexible or loosely defined, role ambiguity is particularly prevalent. The characteristics of work in SMEs, as noted by Agwu and Emeti (2014), frequently result in employees lacking a clear understanding of their responsibilities. This leads to job-related uncertainty and contributes to adverse psychological and organisational outcomes. The link of role ambiguity to burnout and perceptions of abusive supervision as stated earlier, emphasise its significant implications. Moreover, role ambiguity aligns with UMT, especially concerning its influence on team effectiveness and performance appraisal fairness.

To better understand the intersection of organisational characteristics and individual experiences, scholars often turn to role theory. This theoretical framework helps explain how individuals behave within organisations based on the expectations tied to their roles. Central to this theory are the constructs of role conflict and role ambiguity. Role conflict results from contradictory expectations across roles, while role ambiguity stems from insufficient clarity about one's duties (Schuler et al., 1977). Measurement tools developed by Rizzo et al. (1970) are widely used to evaluate these constructs, providing a solid foundation for analysing

individual role perceptions. Cross-validation of these tools has deepened understanding of how roles are experienced across different organisational settings.

Related to role theory are the principles of unity of command and single accountability. These concepts emphasise that employees should receive directives from only one superior at a time and be accountable to a single authority (Rizzo et al., 1970). Such clarity is designed to reduce confusion and promote organisational efficiency.

In the literature, job satisfaction has been shown to be more significantly influenced by role ambiguity than by role conflict (Palomino & Frezatti, 2016). This insight suggests that SMEs should prioritise establishing clear communication channels, defining job roles thoroughly, and ensuring supportive leadership. Addressing role ambiguity effectively can lead to increased productivity, higher retention, and improved job satisfaction. SMEs should also consider creating well-documented job descriptions, as ambiguity frequently arises when employees are unsure of their tasks and responsibilities. Clear descriptions can enhance understanding, thereby reducing confusion and dissatisfaction.

Additionally, providing continuous training and development opportunities equips employees with the skills and knowledge necessary to fulfill their roles, decreasing ambiguity and enhancing job satisfaction. It is also important to maintain transparent communication practices. Open dialogue between management and staff helps clarify expectations, address uncertainties, and minimise misunderstanding. Employees are more likely to experience satisfaction when they understand how their roles contribute to organisational objectives. A clear sense of purpose reinforces role clarity and promotes engagement.

Supportive and approachable leadership further facilitates role clarity. When employees feel safe discussing uncertainties with their managers, ambiguities can be resolved more easily, promoting job satisfaction. In the dynamic environments typical of SMEs, roles

and responsibilities may shift over time. Organisations should promote adaptability while offering guidance to prevent confusion and sustain morale.

Dimensions of Uncertainty Management

Role Ambiguity

This dimension is defined as a lack of clarity or uncertainty about an individual's responsibilities, tasks, and expectations within an organisation, is examined in this study through six aspects. These include: (i) role clarity, which evaluates the employee's understanding of their responsibilities, tasks, and expectations. This happens in the Tuckmans's fourth stage of team development process, where individuals start performing (Kloppenborg, 2015; Tuckman, 1965). The literature (Robbins & Judge, 2024), emphasises the need for managers to encourage socialisation programs within the organisation to enhance role clarity; (ii) The degree of role overlap, which considers how overlapping tasks across individuals or departments might lead to confusion. Role overlap can occur during the forming stage when team members still perform tasks together, before clear task delineation (Buchanan & Huczynski, 2017);

(iii) The communication of roles, which assesses the organisation's effectiveness in conveying job responsibilities. Effective communication is essential in ensuring that employees possess a clear understanding of their roles, responsibilities, and the performance standards expected of them. As highlighted in an SME study in the literature (Kuczman et al., 2024), such clarity serves to minimise ambiguity within the workplace, thereby reducing the likelihood of redundant efforts or missed deadlines. Furthermore, well-defined role descriptions facilitate the alignment of individual objectives with the broader strategic goals of the organisation.

Additionally, (iv) performance evaluation is examined in terms of whether employees have a clear understanding of performance expectations, targets, and evaluation criteria. The

need for a set of defined criteria is important in evaluating employees' performance through ranking and written comments (Robbins & Judge, 2024). Emotional displays by managers have been linked to how they communicate performance evaluations. For instance, Robbins and Judge (2024), suggests that effective managers put on a serious look when communicating negative performance evaluation to an employee, and an employee is expected to be calm during this process. According to Social Cognitive Theory, individuals learn through observation and modeling. A manager's nonverbal cues and tone during feedback act as behavioural models that signal expected emotional responses, such as calmness and receptiveness. This observational learning reinforces norms around professional conduct and emotional regulation, which are essential for maintaining team stability and interpersonal harmony. Moreover, this aligns with Social Identity Theory, which suggests that individuals derive part of their self-esteem from the groups they belong to. When feedback is given in a respectful but firm manner, it signals respect for the individual's identity as a professional while also upholding the standards of the team or organisation. If handled poorly, however, negative evaluation can threaten an individual's sense of belonging and reduce their identification with the group, potentially weakening team cohesion.

One concern that has been raised is on how to assess the performance of a team (Buchanan & Huczynski, 2017), as rewarding individuals instead of the team can lead to within-team competition (De Dreu & Nauta, 2009), and have a negative impact on high-performing teams (Robbins & Judge, 2024). Reward systems that emphasise individual performance risk undermining the shared identity, disrupting positive interactions, distorting social comparison processes, and weakening the collective norms and behaviours modeled within the team. As a result, once-cohesive teams may experience fragmentation, reduced collaboration, and a decline in overall performance. This dynamic also ties into Social Comparison Theory, which posits that individuals evaluate their own abilities and opinions by

comparing themselves with others. In environments where individual achievement is emphasised, especially through differential rewards, team members may begin to make more frequent and competitive comparisons. These upward comparisons—while potentially motivating on an individual level—can erode trust and cooperation if not carefully managed, particularly in teams that previously functioned cohesively.

Thus, the interplay between managerial communication styles, reward systems, and team dynamics is deeply rooted in the psychological principles outlined by these theories. To maintain team cohesion and performance, it is crucial for managers to foster environments that reinforce group identity, encourage constructive interaction, support collaborative learning, and minimise divisive comparisons, are factors that ultimately shape how individuals perceive and contribute to the team.

Another important aspect is (v) decision-making authority, which addresses whether employees possess the autonomy needed to execute their duties or whether uncertainty surrounds their ability to make decisions. Task conflicts often arise when team members perform non-routine jobs, which require some level of expertise (Robbins & Judge, 2024). Such tasks often involve ambiguity, interdependence, and diverse perspectives, which can lead to disagreements about the best course of action. In these situations, it is necessary for team members to have a certain level of authority in decision-making to ensure that their expertise contributes meaningfully to the outcome and to enhance ownership and accountability of the work process (Edmondson, 1999). Empowering team members in this way through open-minded discussion and creating mutual benefit relationships can also promote a more collaborative environment where constructive conflict leads to better decision quality (Robbins & Judge, 2024; Tjosvold et al., 2014).

Finally, (vi) feedback and support are considered by evaluating the availability and usefulness of managerial input and performance feedback in reducing ambiguity. The literature

(Daft, 2012), suggests that the best corrective feedback is given when a manager adopts a person-to-person approach. Again, Robbins and Judge (2024) indicate that a manager can sustain a positive behavioural change in employees if feedback becomes values that are build into the organisational culture. Buchanan and Huczynski (2017), suggests the need to use “concurrent feedback” in controlling behaviour to enhance productivity. The author also advocates for the position of “staff employees,” who use their expertise to support line-employees.

The feedback and support perspective, underscores the importance of integrating feedback into everyday managerial practices to promote clarity, motivation, and performance. Embedding feedback mechanisms into organisational culture not only enhances individual growth but also aligns employee behaviour with strategic goals. When feedback is timely, personalized, and supported by expert staff, it encourages a culture of continuous improvement. Ultimately, effective feedback systems act as both a guiding force and a support mechanism, to empower employees and enhance productivity through reduced ambiguity and stronger managerial engagement.

Thus, this study explored role ambiguity through six interconnected aspects that significantly influence employee clarity and organisational effectiveness. These aspects—role clarity, role overlap, role communication, performance evaluation, decision-making authority, and feedback and support—highlight the multifaceted nature of ambiguity in the workplace. Clear role definitions foster alignment between individual and organisational goals, while minimising confusion and inefficiencies, particularly during the early stages of team development. Overlapping responsibilities and ineffective communication can hinder collaboration and delay progress, especially when roles are not well articulated. Evaluating performance through clear criteria and ensuring that employees understand how their work is assessed enhances transparency and motivation. Moreover, providing decision-making

authority supports autonomy and ownership, which are essential for managing complex, non-routine tasks. Encouraging open discussions and constructive conflict further empowers team members, leading to better decision quality. Finally, the integration of timely, person-centred feedback, supported by expert staff and embedded in the organisational culture, reinforces performance standards and promotes continuous improvement.

Role Conflict

Similar to role ambiguity, role conflict, according to Fichter (2010) and Palomino and Frezatti (2016), can occur under a five conditions that include: (i) relevance of assigned tasks, unclear boundaries of authority, ambiguous job objectives, difficulties in time management, and a lack of clarity in role responsibilities. When employees are asked to perform tasks that fall outside the scope of their primary roles, such as a marketing officer being assigned IT-related tasks, task relevance becomes a source of conflict. Disagreements on what aspects of the task are relevant to the success of the team, often generate conflict and reduce coordination (Cronin & Weingart, 2007). This nature of role conflict can be reduced through clarity of communication from the manager on why the task is needed and how the task can improve the bottom line.

(ii) Authority delineation issues arise when there is uncertainty regarding the extent of an individual team member's power or when overlapping responsibilities among employees lead to disputes. It is important to provide an organisational chart that provides how authorities are delineated along the POLC process of the manager (Daft, 2012). This aspect of role conflict is significant in SMEs where the managerial structure is simple, and multiple roles are can be assigned to an employee.

(iii) Clarity in job objectives is essential in the workplace because ambiguous or constantly changing goals can lead to confusion, reduced motivation, and poor alignment of efforts across teams. When employees are uncertain about what is expected of them, and does

not participate in goal setting, it becomes difficult to prioritise tasks effectively through goal setting, which may result in inefficiencies, missing deadlines, and possible decrease in job satisfaction (Buchanan & Huczynski, 2017; Locke & Latham, 2002). Clearly defined objectives can serve as a roadmap for performance and are closely linked to increased productivity and goal attainment, as they assist members of the team to focus their energy on high-impact activities. Moreover, consistent objectives support better communication between managers and employees, encouraging trust and the ability to reduce role ambiguity.

(iv) Time management becomes problematic when individuals struggle to balance multiple responsibilities without clear deadlines or expectations with their personal life. This aspect of work stressor is an important factor in the operation of SMEs because of the low staffing nature. Hence, the need for the management of SMEs to provide avenues to assist employees in managing their time and provide time for leisure and family life (Robbins & Judge, 2024). It has also been stressed in the literature (Łobos et al., 2020), that SMEs should improve HR practices by attracting talent, offering fair rewards, clarifying roles and responsibilities, and nurturing a cooperative, positive work environment.

Consequently, improving HR practices as suggested by Łobos et al. (2020) directly supports better time management in SMEs. Attracting skilled talent ensures tasks are handled efficiently by capable individuals. Fair rewards can boost motivation and reduce turnover, and saving time on recruitment and training. Clear roles and responsibilities minimise confusion and duplication of effort, allowing employees to focus on the right tasks. Finally, a cooperative and positive work environment can facilitate frictionless communication and teamwork, and reduce delays to improve workflow efficiency.

Lastly, (v) role responsibility clarity is critical, as unclear or contradictory instructions undermine task execution and lower morale. Role responsibility clarity refers to how clearly employees understand their job duties, expectations, decision-making authority, and how their

role fits within the larger organisational structure. The lack of formal job descriptions as obtainable in most SMEs (Agwu & Emeti, 2014), can lead to role-related confusion or duplicated efforts (de Kok et al., 2006).

From the discussion so far, it can be said that role conflict manifests when individuals face competing demands across different roles, making it difficult to fulfil one obligation without compromising another. This psychological stressor becomes particularly intense when demands are excessive or incompatible, often resulting in emotional exhaustion and perceived inefficacy (Fichter, 2010). In modern organisations, the need for multitasking intensifies these challenges, leaving employees to navigate multiple pressures across work, family, and social spheres. This continuous strain can contribute to burnout—a condition characterised by emotional depletion, disengagement, and reduced effectiveness in the workplace. Burnout, in turn, diminishes job satisfaction and often leads employees to question their competence or role legitimacy. As a result, individuals experiencing role conflict are more likely to report feelings of dissatisfaction, frustration, and disengagement.

Addressing role conflict effectively requires proactive strategies at both individual and organisational levels. On the individual side, employees can benefit from developing coping strategies such as time management, task prioritisation, and effective communication. Organisations, meanwhile, should promote supportive workplace policies, encourage a healthy work-life balance, and provide resources that help employees navigate conflicting expectations. Addressing the root causes of role conflict, can assist SMEs in creating a more resilient and productive work environments.

Research Gap Analysis on Uncertainty Management in SMEs

The gap closed in this study is to understanding the moderational effect of role ambiguity and role conflict on team cohesion. While role ambiguity and role conflict have been individually studied in relation to psychological outcomes and organisational functioning, their

moderational impact—specifically on team cohesion—has not been adequately explored. This study addresses that oversight by situating these constructs within the framework of role theory and examining how they condition the quality of team dynamics.

The literature draws clear attention to the pervasiveness of role conflict and ambiguity in organisational contexts, particularly in SMEs, where flexibility and overlapping duties are common (Agwu & Emeti, 2014). Both constructs, as explained by Rizzo et al. (1970) and Schuler et al. (1977), are rooted in discrepancies between expectations and clarity of responsibility. Yet, while the adverse effects of these tensions—such as burnout, job dissatisfaction, and perceived abusive supervision—are well documented (Fichter, 2010; Palomino & Frezatti, 2016), their potential to moderate team-level outcomes such as cohesion has received insufficient attention.

Team cohesion thrives on mutual understanding, shared goals, and psychological safety—elements easily disrupted by conflicting roles or unclear expectations. For instance, when team members lack clarity about their responsibilities or receive contradictory directives, interpersonal tension and frustration increase. This undermines collaboration, erodes trust, and impairs the sense of unity essential to cohesive functioning. The literature highlights that ambiguity leads to confusion about task relevance, boundaries of authority, and performance metrics—conditions that directly threaten coordinated team behaviour (Miles, 2012).

Moreover, role conflict—especially inter-role conflict—forces individuals to reconcile competing demands from different domains, such as organisational roles versus functional team roles. This misalignment fragments attention and loyalty, weakening cohesion as individuals prioritise competing allegiances (Fichter, 2010). Emotional strain and disengagement resulting from such tensions can diminish an individual's willingness or capacity to contribute meaningfully to team synergy.

While previous work has established direct links between role stressors and individual outcomes (e.g., job satisfaction, performance), few studies have examined how these stressors alter the relationship between other variables—such as how they may reduce or strengthen the conditions under which team cohesion can emerge. This study thus fills a critical research gap by introducing role conflict and ambiguity as moderators of team dynamics.

Finally, given the complexity and volatility of SME environments, where formal structures and communication protocols are often underdeveloped, understanding how these role tensions influence cohesion is not only theoretically significant but also practically urgent. The integration of role theory with team-level outcomes thus provides a novel analytical lens to explore this operational aspect of SMEs.

Operationalisation of Uncertainty Management Measures

The operationalisation adopts the same approach in the literature (Palomino & Frezatti, 2016), but classified the survey questions in headings.

Role Ambiguity

Below are six related measures of role ambiguity that can be present in SMEs considered in this study.

Role Clarity Perception: Measure the individual's perception of the clarity of their own role within the SME. Assess their understanding of their responsibilities, tasks, and expectations, and whether they have a clear sense of what is expected of them.

Role Overlap: Assess the degree of overlap or redundancy in roles within the SME. Measure the extent to which multiple individuals or departments are responsible for similar tasks or functions, leading to confusion and ambiguity.

Communication of Roles: Evaluate the effectiveness of role communication within the SME. Measure how well the organisation communicates roles, responsibilities, and expectations to employees, ensuring that everyone understands their specific roles.

Performance Evaluation: Measure the clarity and alignment of performance evaluation criteria within the SME. Assess whether employees have a clear understanding of how their performance was assessed and what is expected of them in terms of goals and targets.

Decision-Making Authority: Assess the level of decision-making authority given to employees within their roles. Measure whether employees have the necessary autonomy and decision-making power to carry out their responsibilities effectively, or if there is ambiguity in decision-making boundaries.

Feedback and Support: Evaluate the availability and effectiveness of feedback and support mechanisms within the SME. Measure whether employees receive regular feedback on their performance, clarification on their role-related queries, and the necessary support to overcome role ambiguity.

Role Conflict

Based on the understanding provided in the literature (Fichter, 2010; Palomino & Frezatti, 2016), role conflict can arise in various situations related to task relevance, authority delineation, clarity in job objectives, effective time management, and role responsibility clarity. Addressing these aspects and ensuring clear communication and understanding can help in minimising role conflict within an organisation. Each of these contexts are explained as follows:

Task Relevance: In the context of role conflict, if an individual is asked to engage in tasks that are not relevant or essential to their primary role, it can lead to conflict. For example, if an employee in a marketing department is asked to perform IT-related tasks that are not within their expertise, it can create role conflict as they are being pulled in conflicting directions, leading to confusion and stress.

Authority Delineation: Role conflict can arise if there is a lack of clarity about the extent of one's authority. If an individual is unsure about the scope of their decision-making power or

if their authority overlaps with someone else's, it can lead to conflicts. For instance, if two managers have overlapping authority in a project, it can create confusion and conflicts about who gets to make crucial decisions.

Clarity in Job Objectives: Clear job objectives are essential in minimising role conflict. If an employee does not have a precise understanding of what is expected of them in their role, they might find themselves in situations where they are unsure about what tasks to prioritise. This lack of clarity can result in conflicting priorities and confusion about how to fulfil their role effectively.

Time Management: Effective time management is crucial in preventing role conflict. If an individual is not able to manage their time efficiently and is constantly juggling multiple tasks without a clear sense of priority, it can lead to conflicts. Conflicting deadlines and priorities can create stress and hinder the individual's ability to fulfil their roles effectively.

Role Responsibility Clarity: Role conflict can be reduced when there is clarity in instructions regarding what needs to be done. If the instructions are ambiguous or contradictory, individuals may find it challenging to fulfil their roles effectively, leading to conflicts. Clear, straightforward instructions help in minimising misunderstandings and ensure that individuals can carry out their tasks without conflicting directives.

Table 2.5, below present the operationalised measurement variables of managerial effectiveness. As discussed in the previous section, uncertainty management is measured within the contexts role ambiguity and role conflict as discussed earlier. The 5-scale Likert measurement criteria for managerial effectiveness is defined as follows: *Strongly Disagree (1), Disagree (2), Neutral (3), Agree (4), Strongly Agree (5)*. The number "5" is the highest rating for each question.

Table 2.5*Operationalised measurement variables for Uncertainty Management*

Measured Variable	Operationalised Questions
Role Ambiguity Dimension	<ol style="list-style-type: none"> 1. Role Clarity Perception: I often find myself having to do tasks in a way that seems different from what is expected in my role. 2. Role Overlap: There are cases where I receive incompatible requests from two or more superiors simultaneously, leading to confusion in my tasks. 3. Communication of Roles: My organisation effectively communicates my roles, responsibilities, and expectations to me 4. Decision-Making Authority: I feel I have the necessary autonomy and decision-making power to carry out my responsibilities effectively. 5. Feedback and Support: I receive clarification and support when you have role-related queries or concerns.
Role Conflict Dimension	<ol style="list-style-type: none"> 1. Task Relevance: I engage in tasks that are not essential or relevant. 2. Authority Delineation: I am confident about the extent of my authority. 3. Clarity in Job Objectives: I have a clear understanding of the objectives of my job. 4. Time Management: I ensure I manage my time effectively to accomplish various tasks. 5. Role Responsibility Clarity: The instructions about what needs to be done are straightforward and easy to understand.

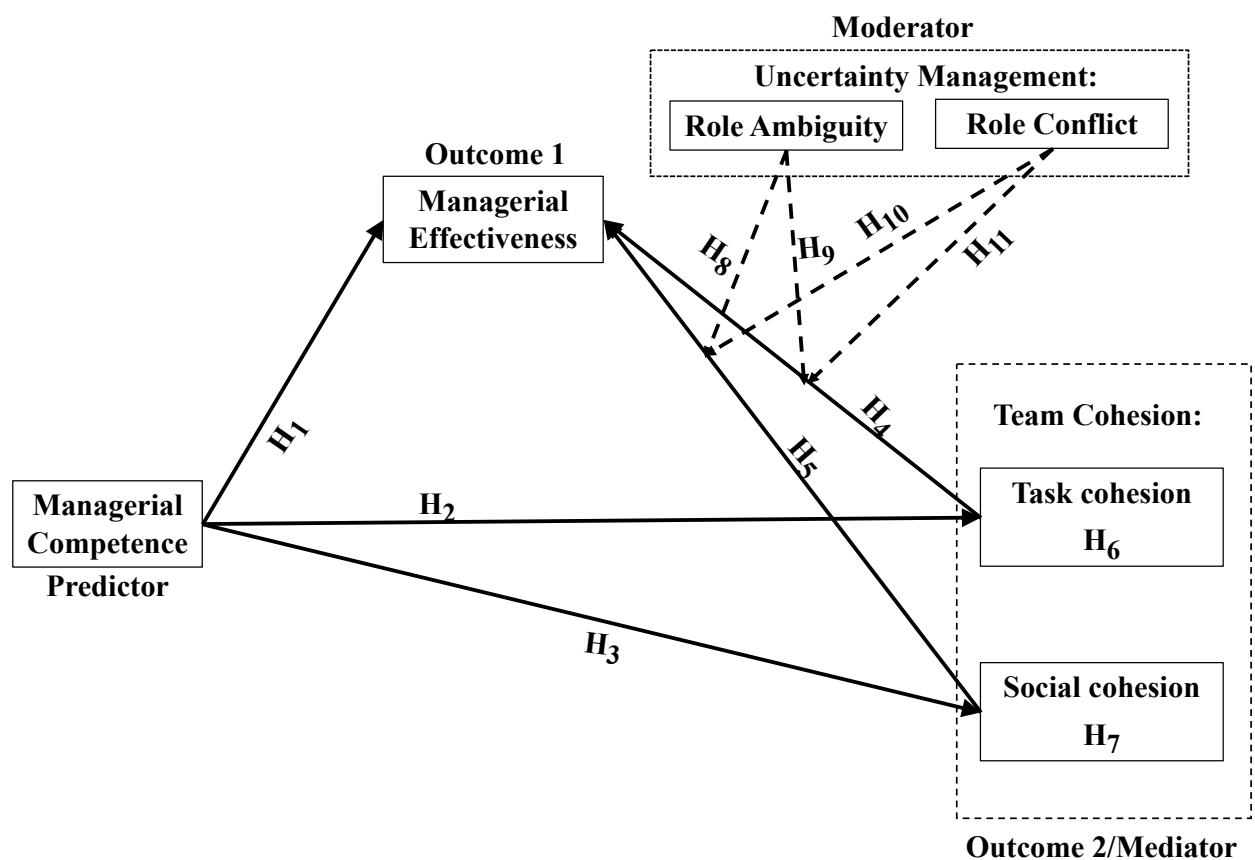
Research Construct

The theoretical framework draws on classical management theories, contemporary research findings, and organisational behaviour concepts, integrating them into a comprehensive understanding of the interconnections between managerial competence, team cohesion, and managerial effectiveness in the context of SMEs. The research hypotheses (Figure 4.1), provide clear predictions regarding the relationships and interactions between these variables, forming the basis for empirical investigations.

The research construct revolves around the interrelationship between managerial competence, team cohesion, and managerial effectiveness within the context of Small and Medium Enterprises (SMEs). Several previous studies are cited, all pointing to the critical importance of managerial competence and team cohesion for achieving managerial effectiveness in organisations. Managerial effectiveness, defined as the ability of managers to achieve organisational goals through efficient management practices, has been highlighted in the literature (Fonceca et al., 2017). It is stressed that managerial roles such as planning, organising, leading, and controlling are essential for the effective administration of resources within an organisation (Jones & George, 2016).

Figure 2.1

Research Construct and Conceptual Framework



Managerial competence (MC) is identified as a key factor influencing managerial effectiveness. MC is described as a combination of skills such as influence, people management, and teamwork, tailored to an individual's traits, organisational context, and job demands. The literature emphasises the importance of MC in aligning with business strategy and adaptability to change, directly impacting organisational performance and productivity.

The *first hypothesis (H1)* posits that managerial competence significantly influences managerial effectiveness. Managerial competence refers to the knowledge, skills, and abilities that managers possess, enabling them to perform their roles effectively. Managerial effectiveness, on the other hand, pertains to the ability of managers to achieve organisational goals through skilful management practices. Managerial competence is a multifaceted attribute that significantly influences managerial effectiveness. Competent managers are not only knowledgeable but also possess a diverse set of skills that are crucial for effective leadership, decision-making, problem-solving, and communication. Their ability to lead, motivate, and adapt to change enhances organisational performance and ensures that the company can achieve its goals and objectives. Therefore, Hypothesis H1 stands as a fundamental pillar in understanding the relationship between managerial competence and managerial effectiveness, emphasising the essential role competent managers play in the success of any organisation.

Team cohesion, comprising both task cohesion (TC) and social cohesion (SC), is identified as another critical factor in organisational success. TC refers to the extent to which team members work together to achieve common goals, while SC pertains to the emotional bonds and friendships within the team. Both dimensions of cohesion are linked to effective teamwork and have a positive impact on organisational productivity. In the context of SMEs, strong team cohesion is paramount for growth and survival. A cohesive team promotes innovation, efficient collaboration, effective communication, and a positive work environment, all of which contribute to increased productivity and overall success.

The study introduces *hypotheses H2 and H3*, stating that managerial competence positively influences both task cohesion and social cohesion in teamwork. Furthermore, the study explores the mediating role of team cohesion in the relationship between managerial competence and managerial effectiveness. Hypothesis H2 posits that managerial competence has a positive and significant influence on task cohesion within a team. Task cohesion refers to the extent to which team members work together harmoniously to achieve common goals and objectives. It emphasises the shared commitment to accomplishing specific tasks and projects within the team. Managerial competence plays a fundamental role in shaping task cohesion within a team. Competent managers possess the knowledge, skills, and expertise necessary to guide team members effectively in their tasks. When managers demonstrate competence, they instil confidence in their team, providing clear direction and guidance. This clarity ensures that team members understand their roles and responsibilities, leading to a focused and coordinated effort toward achieving shared goals. Competent managers are adept at setting realistic and achievable goals, breaking down complex tasks into manageable components, and aligning individual efforts with the overall team objectives.

Their ability to provide clear instructions, offer valuable feedback, and recognise team members' contributions towards organisational growth can create a sense of ownership, purpose and unity among team members. Team members are more likely to trust and respect a manager who exhibits competence, which strengthens the cohesion among them. Furthermore, competent managers can identify and leverage the unique strengths of each team member, ensuring that tasks are allocated based on individual skills and expertise. This strategic delegation promotes a sense of mutual reliance and interdependence among team members, enhancing task cohesion. Competent managers also facilitate effective communication, ensuring that information flows freely, enabling team members to collaborate seamlessly on tasks and projects.

Hypothesis H3 asserts that managerial competence positively and significantly influences social cohesion within a team. Social cohesion emphasises the emotional bonds, mutual respect, and positive relationships among team members. It highlights the supportive and friendly interactions that contribute to a harmonious team environment. Managerial competence plays a crucial role in nurturing social cohesion within a team. Competent managers possess excellent interpersonal skills, enabling them to build rapport, trust, and mutual respect among team members. They demonstrate active listening, empathy, and understanding, creating an inclusive and supportive atmosphere where team members feel valued and appreciated. Competent managers lead by example, exhibiting professionalism, integrity, and ethical behaviour in their interactions. Their actions set the tone for the team, promoting a positive work culture characterised by collaboration, cooperation, and camaraderie. When team members perceive their manager as competent, they are more likely to emulate these qualities, encouraging social cohesion.

Competent managers also recognise the diverse backgrounds, perspectives, and talents within their team (Atesmen, 2015). Implying that they promote inclusivity and diversity, ensuring that every team member's contribution is acknowledged and respected. This is corroborated in the literature (Maj, 2023), that diversity and inclusion impact attitudes towards work, demonstrating to managers that promoting a workplace that is both diverse and inclusive can significantly affect employees' job satisfaction. By encouraging open communication, sharing ideas, and appreciating differences, competent managers create a sense of belonging and unity among team members, strengthening social cohesion. Moreover, competent managers are skilled at resolving conflicts and addressing interpersonal issues promptly and effectively. Their ability to mediate disagreements, promote understanding, and encourage forgiveness contributes to a harmonious team environment. Socially cohesive teams, led by competent managers, are more resilient in the face of challenges, as team members support

each other, share resources, and collaborate to overcome obstacles. Thus, study indicates that employee satisfaction can be positively influenced when workers perceive their work environment as being inclusive (Maj, 2023).

Hypotheses H4 and H5 propose that managerial effectiveness is positively and significantly influenced by task cohesion and social cohesion in teamwork, respectively. These hypotheses highlight the pivotal role of team cohesion in shaping the effectiveness of managers within the context of Small and Medium Enterprises (SMEs). Task cohesion involves the alignment of individual efforts toward accomplishing team-specific tasks and objectives. Hypothesis H4 posits that when team members are cohesive in their approach to tasks, it positively impacts managerial effectiveness. Task cohesion plays a critical role in managerial effectiveness by ensuring that team members collaborate seamlessly to achieve specific organisational objectives. In SMEs, where resources are often limited, efficient task completion is crucial for achieving operational efficiency and productivity. When team members are task-oriented and work cohesively, managers can leverage this unity to streamline processes, enhance productivity, and meet organisational goals effectively.

A cohesive team working towards common tasks encourages a sense of unity and mutual support among team members. This mutual support enables managers to delegate tasks, trust team members to accomplish them, and focus on higher-level strategic activities. Additionally, task cohesion promotes clear communication, reduces misunderstandings, and enhances problem-solving capabilities within the team. Managers can rely on the collaborative efforts of a cohesive team, leading to efficient decision-making and effective problem resolution.

Furthermore, in the context of SMEs, where employees often wear multiple hats and are engaged in diverse tasks, task cohesion becomes even more critical. When team members collaborate harmoniously, they can share insights, knowledge, and expertise, leading to

innovative solutions and increased adaptability in the face of challenges. Social cohesion focuses on the emotional bonds, camaraderie, and friendships among team members. It emphasises the interpersonal relationships, trust, and mutual respect within the team. Hypothesis H5 suggests that when team members share a strong social cohesion, characterised by positive social interactions and supportive relationships, it positively influences managerial effectiveness. Social cohesion is vital for creating a positive work environment within SMEs. When team members have strong social bonds, they are more likely to collaborate effectively, share information willingly, and support each other during challenging situations. Such a positive atmosphere enhances job satisfaction, reduces conflicts, and promotes a sense of belonging among team members.

In the context of managerial effectiveness, social cohesion contributes significantly. Managers who lead socially cohesive teams can benefit from higher employee morale and motivation. Team members who feel valued and respected are more likely to be engaged in their work, leading to increased productivity and efficiency. Moreover, social cohesion nurtures open communication channels, enabling team members to express their ideas, concerns, and feedback freely. This transparent communication is invaluable for managers as it provides them with valuable insights into the team dynamics and organisational challenges.

Additionally, in SMEs, where teamwork is essential for innovation and problem-solving, social cohesion enhances the sharing of diverse perspectives and creative ideas. Managers can harness the collective creativity of socially cohesive teams to develop innovative solutions to complex problems, giving the organisation a competitive edge in the market.

Hypotheses H6 and H7 propose that both task cohesion and social cohesion mediate the direct relationship between managerial competence and managerial effectiveness. Additionally, the study delves into the moderating effects of role ambiguity and role conflict on the relationship between team cohesion and managerial effectiveness. Role ambiguity,

defined as uncertainty about one's responsibilities, and role conflict, arising from inconsistencies between duties, are identified as organisational tensions that can influence how employees perceive their roles and navigate their responsibilities.

Hypothesis H6 suggests that task cohesion acts as a mediator, enhancing the relationship between managerial competence and managerial effectiveness. In other words, the positive impact of managerial competence on managerial effectiveness is amplified when task cohesion within the team is strong. When task cohesion is high, team members work together seamlessly, coordinating their efforts to accomplish specific objectives. Competent managers can leverage this unified effort more effectively. They can align individual skills with tasks, ensuring that each team member's capabilities are utilised optimally.

Task cohesion facilitates clear communication, mutual understanding, and collective problem-solving, allowing the team to execute tasks efficiently under the guidance of a competent manager. Task cohesion ensures that team members are committed to achieving common goals. This commitment, combined with the managerial competence of effective planning and organisation, leads to enhanced productivity. Competent managers can organise tasks, set priorities, and establish realistic timelines. In a cohesive team, these plans are executed coherently, resulting in increased efficiency and productivity. Task cohesion amplifies the impact of managerial competence by ensuring that the team's efforts are directed toward the right tasks, maximising overall effectiveness. Competent managers can define roles clearly, ensuring that each team member understands their responsibilities. When task cohesion is present, team members collaborate within these clearly defined roles, avoiding confusion and overlaps. This clarity in roles enhances task efficiency and effectiveness. Team members can trust one another to fulfil their responsibilities, leading to smooth workflow and effective task completion.

Hypothesis H7 proposes that social cohesion acts as a mediator, strengthening the relationship between managerial competence and managerial effectiveness. When social cohesion is high within a team, the positive influence of managerial competence on managerial effectiveness is further enhanced. Social cohesion promotes open communication and trust among team members. Competent managers can communicate effectively, ensuring that information flows freely within the team. When social cohesion is present, team members feel comfortable sharing ideas, feedback, and concerns. This open communication enhances the manager's ability to understand the team dynamics, enabling them to make decisions that positively impact team effectiveness. Additionally, the collaborative atmosphere nurtured by social cohesion promotes the exchange of innovative ideas, leading to creative problem-solving and decision-making.

Competent managers create a positive work environment by demonstrating professionalism, respect, and fairness. Social cohesion amplifies this positive atmosphere, creating a workplace where team members feel valued and appreciated. In such an environment, team members are motivated to perform at their best, leading to enhanced effectiveness. Socially cohesive teams exhibit higher morale, job satisfaction, and commitment to the organisation, factors that contribute significantly to managerial effectiveness. In socially cohesive teams, team members support one another both personally and professionally. Competent managers can harness these supportive relationships for positive work outcomes by encouraging teamwork, mutual respect, and empathy. When team members feel supported, they are more likely to collaborate effectively, seek assistance when needed, and contribute positively to the team's goals. The manager's competence in building and maintaining these relationships is essential. Social cohesion strengthens the manager's influence, ensuring that the team members are more receptive to the manager's guidance and leadership, thereby enhancing overall managerial effectiveness.

In the above context, both task cohesion and social cohesion play central roles as mediators between managerial competence and managerial effectiveness. Task cohesion ensures efficient task execution and clear role definitions, maximising the impact of managerial competence on task-related activities. Social cohesion, on the other hand, promotes a positive work environment, open communication, and supportive team relationships, amplifying the influence of managerial competence on interpersonal interactions and overall team dynamics. Managers who recognise and nurture both task and social cohesion can leverage these cohesive factors to enhance their effectiveness, ultimately contributing to the success of the organisation.

Hypotheses H8, H9, H10, and H11 posit that there are positive moderating effects of role ambiguity and role conflict on the relationship between both social cohesion and task cohesion in teamwork and managerial effectiveness. Role ambiguity and role conflict, although potentially disruptive, can be managed effectively through the presence of social and task cohesion within a team. Social cohesion provides emotional support, encourages open communication, and encourages unity in the face of uncertainties and conflicts. Task cohesion ensures effective collaboration, role clarification, and goal alignment, mitigating the negative impact of unclear roles and conflicting duties. Competent managers play a critical role in leveraging these cohesive factors to enhance their teams' effectiveness, even in challenging and ambiguous work situations.

Hypothesis H8 suggests that role ambiguity, or uncertainty about one's responsibilities, strengthens the relationship between social cohesion within a team and managerial effectiveness. In other words, when role ambiguity is high, the positive impact of social cohesion on managerial effectiveness is amplified. Role ambiguity creates a sense of uncertainty among employees regarding their tasks and responsibilities. In situations of high role ambiguity, social cohesion becomes a crucial coping mechanism. Socially cohesive teams provide support, share information, and offer assistance, helping team members navigate

through ambiguous situations. When team members have a strong social bond, they can collaboratively address uncertainties, find creative solutions, and adapt to changing roles more effectively. Competent managers can harness this social cohesion in the face of role ambiguity by encouraging open communication and mutual assistance among team members. Therefore, in the presence of role ambiguity, socially cohesive teams are better equipped to enhance managerial effectiveness.

Hypothesis H9 posits that role ambiguity strengthens the relationship between task cohesion within a team and managerial effectiveness. When role ambiguity is high, the positive impact of task cohesion on managerial effectiveness is amplified. In situations of role ambiguity, task cohesion becomes essential for effective task execution. When team members are uncertain about their roles, a cohesive team can collaboratively define roles, establish priorities, and distribute tasks based on individual strengths. Task cohesion ensures that team members coordinate efforts, reduce overlaps, and work towards common objectives despite unclear role definitions. Competent managers can utilise task cohesion as a mechanism to mitigate the effects of role ambiguity. They can facilitate team discussions, encourage role clarification, and create a shared understanding of tasks and responsibilities. In the presence of role ambiguity, task cohesion enables teams to function cohesively, leading to improved managerial effectiveness.

Hypothesis H10 suggests that role conflict, arising from inconsistencies in duties, strengthens the relationship between social cohesion within a team and managerial effectiveness. When role conflict is high, the positive impact of social cohesion on managerial effectiveness is amplified. Role conflict can create tension and disagreements within a team, affecting interpersonal relationships and collaboration. In situations of high role conflict, social cohesion acts as a buffer. Socially cohesive teams can navigate through conflicts more effectively by promoting understanding, encouraging compromise, and furthering a sense of

unity. Competent managers can mediate conflicts, facilitate constructive communication, and encourage empathy among team members. Social cohesion, in the presence of role conflict, enables teams to address conflicts positively, ensuring that they do not hinder the team's effectiveness. Therefore, social cohesion becomes a valuable asset in mitigating the negative effects of role conflict on managerial effectiveness.

Hypothesis H11 suggests that role conflict strengthens the relationship between task cohesion within a team and managerial effectiveness. When role conflict is high, the positive impact of task cohesion on managerial effectiveness is amplified. Role conflict can create confusion and disrupt the harmonious workflow within a team. In the presence of role conflict, task cohesion becomes essential for maintaining order and productivity. Task cohesion ensures that team members collaborate effectively, resolve conflicts, and align their efforts toward achieving common goals. Competent managers can use task cohesion as a strategy to mitigate the negative effects of role conflict. By emphasising the importance of teamwork, promoting collaboration, and clarifying roles, managers can enhance the team's ability to function cohesively despite conflicting duties. Task cohesion, in the presence of role conflict, enables teams to overcome challenges and work collaboratively, ultimately enhancing managerial effectiveness.

Study Industry Description

The Nigerian oil and gas sector currently operate within the Niger Delta region of Nigeria. The discovery of oil in significant quantities first occurred in Oloibiri in 1958 (NNPC, 2020). Oil production from the Niger Delta has averaged over a million barrels per day since 1973 (Trading Economics, 2022). Over time, this industry has become the primary economic driver for the nation, contributing over 90% of the GDP (Balouga, 2009; NNPC, 2020). As a result, the country's economic recovery is heavily reliant on both the price and volume of crude oil available in the international market. This industry encompasses the upstream, midstream,

and downstream sectors, each playing a distinct role within the oil and gas supply chain framework (Herkenhoff, 2018).

The Nigerian oil and gas industry hold significant importance as a lucrative multimillion-dollar sector, serving as the primary contributor to the nation's gross domestic product (GDP) due to its substantial reserves of oil and gas. However, the industry is also characterised by high investment risks stemming from uncertainties in reservoirs and product prices (Dickson, 2019; Haider, 2020; Jahn et al., 2008).

SMEs in the Nigerian oil and gas industry primarily consist of servicing companies. These companies specialise in providing a range of services to support the operations of larger oil and gas companies. These services may include equipment maintenance, repairs, logistics support, and technical assistance. As SMEs, these servicing companies play a crucial role in the industry's ecosystem, contributing to the smooth functioning and efficiency of oil and gas operations in Nigeria. They provide specialised services such as equipment leasing, maintenance, and technical support to larger oil and gas companies operating in Nigeria. The expertise of these companies lies in supporting the exploration, production, and transportation activities of oil and gas companies, contributing to the overall growth and development of the Nigerian energy sector. Despite their significant role in income generation, employment, local capacity building, and poverty eradication, small and medium enterprises (SMEs) have not been actively involved in the Nigerian oil and gas industry. It has been advocated in a previous doctoral thesis that SME owners in the industry can leverage low-cost strategies, hire skilled personnel, collaborate with partners, and exhibit financial integrity to enhance profitability. While the study by Inubiwon (2017) revealed the potential hiring of skilled personnel by these small and medium-sized enterprises (SMEs), it did not address the evaluation of the owners' managerial capabilities. The need to address the functional capabilities of SMEs through goal setting has been stressed in the literature (Ioniță, 2013).

Furthermore, despite promoting the low-cost strategy as a key driver of profitability, it failed to address the implications it has on team cohesion and managerial effectiveness. For the growth of Small and Medium Enterprises (SMEs) in the Nigerian oil and gas industry, several factors come into play. Firstly, SMEs contribute significantly to job creation, economic diversification, and poverty reduction in Nigeria. By supporting the growth of SMEs in the oil and gas industry, the Nigerian economy can benefit from increased employment opportunities and reduced reliance on oil revenue. Moreover, SMEs promote innovation and competition in the industry, but sometimes hindered by the drive for cost-control, thereby starving innovation (Minh & Hjortsø, 2015). These smaller companies often bring fresh ideas, new technologies, and efficient business practices to the table. Their presence encourages larger companies to adapt and improve their operations, leading to overall industry growth and development.

Additionally, SMEs often serve as suppliers and subcontractors to larger firms, creating a symbiotic relationship that boosts the value chain and supports local content development. Furthermore, promoting the growth of SMEs in the Nigerian oil and gas industry enhances local participation and empowerment. Historically, the industry has been dominated by multinational corporations, leaving limited opportunities for local entrepreneurs. By facilitating SME growth, the Nigerian government can empower local businesses, promote indigenous expertise, and drive economic inclusivity. Thus, studying the relationship between managerial competence, team cohesion, managerial effectiveness, and the moderation of uncertainty management can provide actionable insights for SMEs in the Nigerian oil and gas industry. It can help improve leadership skills, promote team collaboration, navigate uncertainties, identify best practices, and attract investment, which contribute to the growth and success of SMEs in the industry. The specific attraction of this study includes the following:

- **Enhancing managerial effectiveness:** Understanding how managerial competence and team cohesion influence managerial effectiveness can help identify key areas for improvement. By developing effective leadership and management skills, SMEs can enhance decision-making processes, optimise resource allocation, and improve overall performance.
- **Promoting team cohesion:** Team cohesion plays a vital role in SMEs' success. Researching the factors that contribute to team cohesion, such as effective communication, shared goals, and mutual trust, can help managers promote a cohesive and collaborative work environment. This, in turn, can enhance productivity, employee satisfaction, and innovation within the organisation.
- **Managing uncertainty:** The oil and gas industry is inherently volatile and subject to various uncertainties, including price fluctuations, regulatory changes, and geopolitical risks. Studying the moderation of uncertainty management can provide insights into effective strategies for navigating these uncertainties. By developing robust risk management practices, SMEs can mitigate potential disruptions, make informed decisions, and adapt to changing market conditions more effectively.
- **Identifying best practices:** Research on the relationship between managerial competence, team cohesion, and managerial effectiveness can uncover best practices and success factors specific to the Nigerian oil and gas industry. These insights can be shared with SMEs through training programs, knowledge-sharing platforms, and industry associations, enabling them to adopt effective management strategies and improve their competitiveness.
- **Attracting investment and partnerships:** Demonstrating strong managerial competence, team cohesion, and effective uncertainty management can enhance SMEs' reputation and attractiveness to potential investors and partners. Investors and stakeholders are more likely

to engage with organisations that exhibit sound management practices, as it indicates a higher likelihood of success and sustainability

Summary on Chapter 2

In this chapter, the author introduces the adopted theoretical framework for the doctoral research and describes its application in the specific industry of research. The section emphasises the significance of theory in research up to this point and conducts a thorough analysis of the theories adopted for the study. Additionally, it provides an in-depth portrayal of the industry under examination, aiming to offer readers a comprehensive understanding of the theoretical foundation and its relevance to the research topic.

First, the concept of managerial competence is crucial in the context of small and medium-sized enterprises (SMEs) as it directly impacts their success and sustainability. Competency, as defined, refers to the capability or ability inherent in the desired behaviour necessary to excel in a specific job role. Empirical studies highlight that the lack of appropriate management experience and competencies often leads to failures in SMEs. For these businesses, managerial competence encompasses both managerial and technical know-how, essential for gaining a competitive edge. It was noted that SMEs face multifaceted challenges arising from both internal operations and external business environments. These challenges necessitate competent managers who can adapt, strategise, and make informed decisions. The success of SMEs is intricately linked to the competencies of their managers, especially in areas such as decision-making, resource optimisation, adaptability, effective leadership, problem-solving, and relationship management. Each of the proposed measures was discussed as follows. (1) Effective decision-making is fundamental to organisational success. Competent managers possess the ability to analyse situations, evaluate risks, and identify efficient strategies. In the context of SMEs, decision-making often rests with the owner/manager, making it essential to investigate whether employees are empowered to engage in decision-

making processes and if there is a shared approach to decision-making. Cultural factors, such as Nigeria's high-power distance, impact decision-making styles, potentially influencing team cohesion. (2) Optimising resources, including personnel and technology, is critical for SMEs, which often operate with limited resources. Competent managers proactively motivate employees, recognise their skills, and provide necessary technology and training, enhancing individual growth and team cohesion. Effective resource allocation ensures productivity and organisational goal accomplishment. (3) SMEs operate in dynamic environments, necessitating adaptability. Competent managers facilitate adaptive change by encouraging open communication, providing incentives, and promoting an innovative culture. Employees' ability to align with organisational culture positively impacts job satisfaction, motivation, and productivity, contributing to overall success. (4) Leadership is paramount in SMEs, shaping organisational culture and decision-making. Competent managers exhibit effective communication, delegation, and support for innovation and teamwork. Leadership styles impact followership, and the study aims to identify the most suitable leadership behaviours nurturing team cohesion and performance in SMEs. (5) Effective problem-solving skills are vital for addressing challenges faced by SMEs, especially considering their limited resources. Competent managers empower employees to contribute ideas, adopt creative proposals, and explore various alternatives, promoting innovation and diverse problem-solving approaches. (6) Building strong relationships with stakeholders, including employees, customers, suppliers, and the local community, is essential for SME success. Competent managers excel in interpersonal skills, effective communication, negotiation, and conflict resolution. Positive stakeholder relationships contribute significantly to SME sustainability and overall success.

The study aims to operationalise these dimensions of managerial competence within the context of SMEs, focusing on how these competencies impact team cohesion. By investigating these variables, the research seeks to provide valuable insights into the role of

managerial competence in enhancing organisational effectiveness and team dynamics within SMEs, ultimately contributing to the body of knowledge in the field of management and organisational behaviour.

Second, managerial effectiveness, a critical aspect of organisational success, has garnered significant attention in the literature due to its pivotal role in achieving favourable outcomes through skilful management of specific situations. It is essential to evaluate a manager's effectiveness based on their ability to achieve results by adeptly handling various challenges within the organisation. This perspective aligns with the broader understanding of effectiveness in management. In small and medium-sized enterprises (SMEs), achieving managerial effectiveness is influenced by unique factors such as streamlined management hierarchy, labour-intensive processes, basic technological infrastructure, and limited access to funding, all of which shape the approach to effective management in these contexts. Theoretical frameworks and empirical studies contribute valuable insights into managerial effectiveness. According to the "action and performance theory" proposed by Boyatzis (1982), effective managers not only possess the necessary skills and competencies but also proactively apply them in their roles. This emphasises the dynamic nature of managerial effectiveness, where successful managers are those who can adapt and apply their knowledge effectively. Additionally, the alignment of managerial competencies with organisational needs is crucial, highlighting the importance of tailoring managerial actions to meet specific organisational requirements, as emphasised by Pickett (1998).

Furthermore, the style of leadership adopted by managers significantly impacts their effectiveness within a particular work context, as demonstrated by the study conducted by Enshassi and Burgess (1991). Effective managers balance both task and people management, promoting positive relationships and productivity among team members. The significance of this balance is underscored by Analoui et al. (2010), who advocate for a comprehensive

approach to managerial effectiveness, emphasising both task management and people management within the organisational context. This balanced approach not only promotes effective management but also enhances team cohesion, leading to improved group performance and overall organisational success.

Analoui et al. (2010) identified obstacles hindering managerial effectiveness, including inadequate appraisal systems, excessive workloads, ineffective human development policies, lack of career planning, and insufficient emphasis on strategic management development. Addressing these impediments is crucial for optimising managerial effectiveness and creating a conducive work environment for teams. In the context of SMEs in the oil and gas industry, these findings are particularly significant. SMEs in this sector face unique challenges, such as resource constraints, intense competition, and complex regulatory environments. For them, managerial effectiveness goes beyond operational targets; it involves nurturing a motivated and cohesive workforce, addressing impediments, and investing in robust HR practices and professional development.

Additionally, the assessment of managerial effectiveness can be examined through various dimensions, each essential for effective management. These include, setting clear and achievable goals, tracking progress, making timely and informed decisions, communicating effectively, prioritising tasks, allocating resources wisely, utilising project management methodologies, promoting teamwork, resolving conflicts, and demonstrating emotional intelligence are critical dimensions outlined by different authors. In the oil and gas industry, where teamwork, efficient task organisation, and effective conflict resolution are paramount, managers excelling in these areas are better positioned to lead teams that navigate industry challenges, optimise resource utilisation, and work cohesively to achieve organisational goals.

In the specific context of SMEs in developing nations like Nigeria, managerial effectiveness assumes even greater importance. The four dimensions of managerial

effectiveness - results-oriented, efficient task organisation, teamwork, and relationship-building - are crucial for SMEs in Nigeria to not only survive but also thrive in a challenging and rapidly evolving environment. Managers must be adept at setting clear goals, tracking progress, making timely decisions, prioritising tasks, delegating effectively, promoting teamwork, resolving conflicts constructively, and advancing positive relationships. By focusing on these dimensions and operationalising measures within these contexts, SMEs in Nigeria can enhance their managerial effectiveness, ensuring their sustainable growth and success in the competitive business landscape.

The third theme focused on team cohesion. As a research concept, team cohesion is a critical factor in maximising a team's effectiveness and performance. Researchers have explored various ways to improve team cohesion, but inconsistencies in its definition and measurement across studies present challenges. To address this, Salas et al. (2015) propose defining cohesion considering both task and social subdimensions, emphasising behavioural and attitudinal aspects. Their definition of a team involves individuals working adaptively toward shared goals, highlighting the importance of team-level analysis. Strong team cohesion benefits Small and Medium Enterprises (SMEs) by increasing productivity, advancing innovation, enabling efficient communication, and enhancing employee morale, which is crucial for both growth and survival.

In the context of SMEs, team cohesion is pivotal. For growing SMEs, cohesive teams boost productivity and innovation through efficient collaboration and idea development. Effective communication within cohesive teams allows quick adaptation to market changes, ensuring competitiveness. Conversely, for SMEs facing closure risks, cohesive teams offer collective resilience, enhancing problem-solving and crisis management, potentially saving the business from failure. Managers play a key role in nurturing team cohesion, but they must balance promoting strong team bonds with individual and collective performance goals.

Theoretical frameworks like Social Comparison Theory (Festinger, 1954), Social Cognitive Theory (Bandura, 1986), Social Identity Theory, and Self-Categorisation Theory (Tajfel & Turner, 1979) help understand team cohesion dynamics. These theories emphasise shared identity, positive interactions, social learning, effective communication, and influence on behaviour, crucial for enhancing cohesion. Socialisation processes and productive output contribute significantly to team effectiveness in SMEs, emphasising the importance of both social and task cohesion. Social cohesion builds supportive environments, promoting trust and collaboration, while task cohesion ensures efforts translate into high-quality outcomes.

Hackman's team effectiveness theory further explores team dynamics. Harmonious teams perform better, leadership styles influence team dynamics, larger teams benefit from diverse resources, and stagnant team membership may lead to declining performance. Introducing new perspectives and restructuring can prevent stagnation, enhancing team effectiveness.

Thus, the study delves into the dimensions of team cohesion, focusing on task and social subdimensions as suggested in the literature (Salas et al., 2015). Task cohesion involves communication quality, goal and role clarity, cooperation, trust, and conflict resolution. Social cohesion includes social interactions, trust, shared values, empathy, inclusion, and conflict management. Examining these facets provides comprehensive insights into the relationship between managerial competence and team cohesion, offering valuable implications for SMEs aiming to enhance productivity and collaborative effectiveness.

Therefore, one can say that team cohesion is essential to the success of SMEs, with the ability of impacting productivity, innovation, and crisis management. The theoretical frameworks and models of team cohesion offers valuable insights, emphasising the importance of shared identity, positive interactions, social learning, effective communication, and behaviour influence. Understanding the dimensions of task and social cohesion guides SMEs

in nurturing a cohesive work environment, ensuring sustained growth and competitiveness.

The fourth theme discussed uncertainty management, focusing on the two critical areas of role ambiguity and role conflict. In the realm of organisational psychology, Uncertainty Management Theory (UMT) serves as a guiding framework for understanding how individuals navigate uncertainty in interpersonal and intercultural contexts. This theory underscores the significance of information-seeking, communication behaviours, and cultural factors in effectively managing uncertainty. In the context of small and medium-sized enterprises (SMEs), UMT is particularly pertinent due to the prevalent challenges related to role ambiguity and role conflict among employees.

Role ambiguity refers to the lack of clarity or uncertainty about one's responsibilities, tasks, and expectations within an organisation. In SMEs, where roles may be less defined or more flexible, role ambiguity can pose a common challenge. Employees often find themselves uncertain about their job expectations due to the absence of well-defined roles and responsibilities. This ambiguity can lead to negative outcomes such as employee burnout and a perception of abusive supervision.

Role conflict, on the other hand, arises when individuals are faced with conflicting demands from different roles they occupy. In today's fast-paced work environment, employees are often expected to handle multiple roles simultaneously, leading to heightened stress levels. This perpetual state of tension makes it challenging for individuals to perform optimally in any given role and significantly increases the risk of burnout.

To address these challenges, organisations, particularly SMEs, must adopt strategies that promote clarity and reduce ambiguity and conflict in employees' roles. Clear communication, well-defined job roles, and supportive leadership play pivotal roles in managing uncertainty effectively. Creating detailed job descriptions, providing training and development opportunities, and furthering transparent communication channels can help

mitigate role ambiguity. Additionally, encouraging adaptability and flexibility in the workplace, along with supportive policies and a healthy work-life balance, can help employees manage conflicting roles more effectively and prevent burnout.

UMT also provides a theoretical framework for understanding these challenges. Role theory, a key component of UMT, emphasises the concepts of role conflict and role ambiguity. Role conflict occurs when conflicting expectations exist within a person's roles, while role ambiguity arises when individuals are uncertain about what is expected of them. Scholars have developed measurement scales to assess these concepts, providing a basis for understanding how individuals perceive their roles in different contexts. Clear lines of communication and accountability, emphasised in concepts like unity of command and single accountability, are crucial in minimising confusion and enhancing efficiency in organisational structures.

In the context of SMEs, six dimensions of uncertainty management are particularly relevant. These dimensions include role clarity perception, role overlap, communication of roles, performance evaluation, decision-making authority, and feedback and support. By addressing these dimensions, organisations can enhance role clarity and minimise conflicts, leading to improved job satisfaction, productivity, and overall employee well-being.

Furthermore, the operationalisation of role ambiguity and role conflict measures is vital for understanding and addressing these challenges effectively. The assessment of task relevance, authority delineation, clarity in job objectives, effective time management, and role responsibility clarity can help identify areas where conflicts may arise. By focusing on these aspects and ensuring clear communication and understanding, organisations can minimise role conflict and ambiguity, creating a more harmonious work environment and enhancing overall job satisfaction and certification among employees.

The literature review shows that Uncertainty Management Theory provides valuable insights into managing uncertainty in organisational contexts, particularly in SMEs where

challenges related to role ambiguity and role conflict are prevalent. The adoption of clear communication strategies, well-defined job roles, and supportive leadership, organisations can effectively navigate these uncertainties, leading to improved employee satisfaction, productivity, and organisational success.

The final discussion centred on re-aligning the theoretical framework to the research construct by highlighting the relationship between the concepts discussed above, and their interrelatedness to the purpose of this PhD work. In the presented research construct, the focus is on understanding the intricate relationships between managerial competence, team cohesion, and managerial effectiveness in Small and Medium Enterprises (SMEs). Drawing from classical management theories, contemporary research findings, and organisational behaviour concepts, the study integrates these elements into a comprehensive framework. The research hypotheses, illustrated clear predictions about the interactions among these variables, forming the foundation for empirical investigations.

Managerial competence (MC) is defined as a blend of skills encompassing influence, people management, and teamwork, tailored to individual traits and organisational demands. Competent managers are crucial for effective leadership, decision-making, problem-solving, and communication. Hypothesis H1 asserts that MC significantly influences managerial effectiveness, emphasising the pivotal role competent managers play in organisational success. Competent managers align with business strategy, adapt to change, and enhance organisational performance and productivity.

While establishing the research construct, the emphasis on team cohesion as central to the purpose of this study was discussed. Team cohesion, comprising task cohesion (TC) and social cohesion (SC), is vital for SMEs' growth and survival. TC reflects team members' collaborative efforts to achieve common goals, emphasising shared commitment to specific tasks. SC emphasises emotional bonds and positive relationships within the team, promoting a

supportive and inclusive environment. Strong team cohesion promotes innovation, efficient collaboration, effective communication, and a positive work environment, all contributing to increased productivity and overall success.

Hypotheses H2 and H3 establish that managerial competence positively influences both TC and SC within a team. Competent managers provide clear direction, guidance, and support, advancing unity and purpose among team members. H2 emphasises the role of managerial competence in shaping task cohesion, ensuring team members' roles and responsibilities are well-defined, enhancing focus and coordination. H3 highlights how managerial competence nurtures social cohesion, advancing mutual respect, inclusivity, and conflict resolution skills. This is corroborated in the literature (Maj, 2023b), where study suggests that employee satisfaction can be positively influenced when workers perceive their work environment as being inclusive.

Hypotheses H4 and H5 propose that managerial effectiveness is positively influenced by task and social cohesion, respectively. Task cohesion ensures efficient task execution, clear communication, and streamlined processes, enhancing productivity. Social cohesion, furthering positive relationships and open communication, boosts employee morale and motivation, leading to increased productivity and efficiency. Socially cohesive teams share diverse perspectives, promoting innovation and creative problem-solving, enhancing the organisation's competitive edge.

Hypotheses H6 and H7 suggest that task and social cohesion mediate the relationship between managerial competence and managerial effectiveness. Task cohesion ensures efficient task execution, maximising the impact of managerial competence on task-related activities. Social cohesion promotes open communication, trust, and supportive team relationships, enhancing interpersonal interactions and overall team dynamics. Competent managers, leveraging these cohesive factors, enhance their effectiveness, contributing to organisational

success.

Moderating Effects of Role Ambiguity and Role Conflict: Hypotheses H8, H9, H10, and H11 explore the moderating effects of role ambiguity and role conflict on the relationship between social cohesion, task cohesion, and managerial effectiveness. Social and task cohesion act as buffers, mitigating the negative impact of unclear roles and conflicting duties. In situations of high role ambiguity, social cohesion provides emotional support, encouraging open communication and collaboration. Task cohesion becomes crucial for effective task execution, aligning team members' efforts despite unclear role definitions. Similarly, in the presence of role conflict, social cohesion promotes understanding and unity, ensuring conflicts do not hinder team effectiveness. Task cohesion becomes essential for maintaining order and productivity, enabling teams to collaborate effectively and overcome challenges.

Thus, this research construct provides a comprehensive understanding of the interconnections between managerial competence, team cohesion, and managerial effectiveness in SMEs. Competent managers who encourage cohesive teams, both in terms of task and social aspects, are better equipped to navigate challenges, enhance productivity, and contribute significantly to organisational success, even in ambiguous and conflicting work situations. To achieve the purpose of this doctoral work, and investigate the research construct discussed in this chapter, a detailed research methodology was provided in chapter 3.

CHAPTER 3: RESEARCH METHOD

Small and medium-sized enterprises (SMEs) have been considered the backbone of today's global national economies. The classification of SMEs varies widely across countries, often depending on the number of employees, annual turnover, or the value of assets. In the Financial System Strategy in 2020, SMEs are defined in Nigeria as organisations that engage from 10 to 250 employees (Oyelaran-Oyeyinka, 2020), while in most developing countries, they are businesses that employ less than 100 employees (e.g., China and Singapore), less than 200 employees (e.g., Vietnam), and less than 300 employees (e.g., Korea). Thus, the definition of SMEs varies from nation to nation, and mainly classified based on number of employees, turnover or total value of assets (Bouzari et al., 2023). This reveals that the classification of SMEs is deeply embedded in national systems of economic management, reflecting a systemic adaptation to domestic economic conditions, labour markets, and policy priorities. These differences are not arbitrary but reflect the unique economic structures and developmental priorities of each nation.

Institutionally, these definitions are vital because they determine access to government support, financial services, and regulatory relief. SMEs often rely on favourable classification to qualify for tax breaks, grants, low-interest loans, and capacity-building programs. This systemic alignment between SME definitions and policy mechanisms underscores the interplay between governance structures, economic planning, and enterprise development. Furthermore, in the context of global development, SMEs are seen as vehicles for inclusive growth, innovation, and employment generation. Their critical role within supply chains and regional markets makes them central to strategies aimed at reducing poverty and stimulating economic participation, especially in developing countries.

The implications of these varied definitions are significant. First, they create challenges for international policy coordination and comparative research. Non-uniform classifications hinder the ability to measure SME performance across borders or assess the effectiveness of support programs at a global scale. Second, employment thresholds influence national labour policies and determine who is covered under specific protections and benefits. Inconsistent classification can lead to inequities in labour rights or access to training programs. Third, the strategic support of SMEs influences broader structural economic shifts, such as the transition from agrarian to industrial economies in the Global South. Properly identifying and supporting SMEs ensures that these businesses contribute effectively to economic diversification and resilience.

Hence, the definitions of SMEs has implications for innovation and global competitiveness. Broader or more inclusive definitions as seen from the Nigerian perspective, may allow more firms to access research funding, technology adoption initiatives, and international trade opportunities. This can accelerate innovation diffusion and boost national competitiveness. However, without standardised frameworks, it remains difficult for global institutions and investors to uniformly assess risks, returns, and development potential.

SMEs can generate significant employment opportunities and contribute substantially to a nation's Gross Domestic Product (GDP) (ESPON, 2020; SMEDAN/NBS, 2017). In Nigeria, for instance, SMEs hold immeasurable potential, with estimates suggesting they can provide employment for over 80 million people and contribute upwards of 60% to the annual GDP (NES, 2019; SMEDAN/NBS, 2017). A search on research in SME-related discourse from 2013 to 2024 on the 16th of June 2024 in Google Scholar, yielded 86,100 literature in 0.07 seconds, suggesting ongoing extensive academic study in this research field.

Despite the promising and significant economic growth of SMEs, their sustainability is occasionally threatened by both internal (e.g., managerial competencies and effectiveness,

professionalism, team cohesiveness, role ambiguity and role conflict) and external challenges (e.g., bank lending rates, political environment, insecurity, poor infrastructures – electricity, road network). The inefficiencies of SMEs have been primarily linked to managerial incompetence and lack of funding, leading to many struggling to survive beyond the first five years after inception (Agwu & Emeti, 2014; Chikwe & Biriowu, 2019; Josiah et al., 2016; Milošević et al., 2019).

The Nigerian government has taken significant steps to support Small and Medium-sized Enterprises (SMEs) by providing low-interest loans through the Central Bank of Nigeria (CBN), aiming to improve access to capital and stimulate business growth (Oyelaran-Oyeyinka, 2020). However, despite this financial backing, many SMEs continue to face serious challenges, with managerial incompetence identified as a persistent problem undermining their success (NES, 2019; SMEDAN/NBS, 2017). This highlights that funding alone is insufficient to ensure SME growth and sustainability.

Organisational performance literature emphasises the critical role of competent management in achieving goals through the efficient allocation and utilisation of resources, both human and financial (Daft, 2012; Jones & George, 2016). Effective management is therefore fundamental not only to making good use of available capital but also to steering SMEs towards strategic growth and long-term viability.

Supporting this view, recent research within Nigerian SMEs in Port Harcourt demonstrates a direct link between managerial competence and increased workplace innovation (Chikwe & Biriowu, 2019). This finding suggests that skilled management not only enhances operational efficiency but also fosters innovation, which is crucial for competitiveness and adaptation in dynamic markets.

Given the fundamental role that managerial competence plays in maximising the benefits of financial support, improving organisational performance, and promoting

innovation, there is a clear and pressing need for enhanced research focused on managerial skills and capabilities within Nigerian SMEs. Such research can inform targeted interventions, training programs, and policies designed to strengthen management competence, ultimately leading to more sustainable SME growth and economic development.

Consequently, this study extends previous research by examining how managerial competence, both directly and indirectly, influences the performance of small and medium-sized enterprises (SMEs). It focuses on identifying the key elements, such as team cohesion and effective management, that play a role in enhancing SME efficiency and productivity. These areas are especially important because managers are central to helping businesses adjust to changing market demands (Daft, 2012). It looks into key contributing elements of team cohesion and managerial effectiveness, which have been investigated as critical to organisational success as highlighted in the literature (e.g., Dinh & Salas, 2017; Fonceca et al., 2017; Lara & Salas-Vallina, 2017; Salas et al., 2015). The study also explores how uncertainty, particularly in the form of role ambiguity and role conflict, may shape the relationship between team dynamics and managerial performance. The analyses of these connections is aimed at providing practical insights that can support the ongoing growth and resilience of SMEs. The conclusions drawn may also serve as a basis for designing informed business strategies and public policies aimed at strengthening this sector.

It can also inform the need of support systems in the form of training and development that can equip SME leaders with the needed skills and knowledge to overcome managerial challenges.

Thus, the research highlights the context and significance of SMEs, identifies the research gap in understanding the role of managerial competencies, and outlines the potential contribution to existing knowledge. Finally, it details the specific factors to be investigated and the anticipated impact of the research findings.

Hence, building upon the established foundation provided by the literature review in Chapter 2, this section details the research design and methodology employed. The underlying philosophical assumptions that inform the research was explicitly stated. Following this, the chapter will explain the selection process for the target population and the rationale behind the chosen sample size. Survey instrument operationalisation and the specific methods used for data collection is described in detail. Finally, the chapter outlined the multi-approach statistical techniques that was utilised to analyse the collected data. This discussion in this chapter is to ensure transparency and the replication of the research methodology.

Research Approach and Design

When conducting research, it is essential to address a series of questions related to the problem at hand, existing knowledge and gaps, and how to acquire the necessary knowledge to gain a better understanding of the issue. To accomplish this, researchers must adopt a philosophical paradigm that aligns with their field of study. Selecting a reliable research philosophy is critical to ensuring that the expected outcome aligns with the researchers' assumptions concerning their philosophical assumptions and design. Subjectivity is a factor in research, but there are means to minimise it. One effective approach is to adopt an appropriate research methodology (Saunders et al., 2019).

There are two principal approaches to research design: quantitative and qualitative. Quantitative research, typically associated with the positivist paradigm, focuses on measurable variables and seeks to establish causal relationships (Easterby-Smith et al., 2015; Saunders et al., 2019). In contrast, qualitative research aligns with interpretivist thinking and is employed to explore complex phenomena in depth, addressing the "what," "why," and "how" questions that quantitative methods may overlook (Easterby-Smith et al., 2015; Saunders et al., 2019). A third approach, known as mixed methods, integrates both quantitative and qualitative

techniques to provide a more comprehensive perspective on the research problem (Creswell, 2009; Saunders et al., 2019).

Quantitative research often entails hypothesis testing and tends to operate within structured frameworks, which may limit its flexibility. Qualitative research, on the other hand, allows for more fluid exploration and adaptation during the study process. Scholars have increasingly advocated for combining methodologies, particularly in social sciences, as this can enhance the robustness and depth of research findings (Easterby-Smith et al., 2015; Saunders et al., 2019).

This study adopts a quantitative methodology, selected based on the specific objectives and nature of the inquiry. In striving for in-depth and trustworthy outcomes, researchers apply various quality assurance strategies, such as ensuring reliability, credibility, and transferability of findings. One method frequently employed to achieve these standards is triangulation, which involves using multiple sources or approaches to validate results.

Nevertheless, triangulation is not without challenges. Some critiques highlight that researchers often fail to adequately explain the design or implementation of triangulated methods, reducing transparency and reliability (Casey & Murphy, 2009). Furthermore, triangulation may introduce complications, including ethical dilemmas, extended timeframes, and increased potential for subjective interpretation (Thurmond, 2001). Despite these limitations, when applied thoughtfully, triangulation remains a valuable tool in enhancing research validity.

One issue to consider is the ethical aspect of research. When triangulation is used, especially with participants from various age groups or genders, it can introduce additional ethical challenges and often extends the overall duration of the study (Cannella & Lincoln, 2018; Lincoln et al., 2018; Murad, 2014; Thurmond, 2001).

Another concern involves the financial implications. Triangulation can raise the overall cost of conducting a study, which may pose difficulties in securing adequate funding (Easterby-Smith et al., 2015). The third concern is related to increased subjectivity, which can arise from individual investigator's assumptions in an investigator-triangulation approach. To avoid such issues, researcher subjectivity should be addressed throughout the research process. Thurmond (2001), also suggests that adequate planning is also necessary to avoid errors. Finally, there is a concern that triangulation may not be able to address “scientific-ness and exactness” (Oppermann, 2000), due to the varied approaches and inexplicit explanation of the triangulation design adopted by some researchers (Casey & Murphy, 2009). As this research develops a model using existing concepts with well-developed measurable dimensions, there is no need to reinvent the wheel by developing new concepts, which would be time-wasting.

Rationale for Quantitative Approach

The selection of the research method is fundamentally influenced by the adopted research philosophy, as this philosophy dictates the overall approach and process of inquiry (Saunders et al., 2019). This study is grounded in a positivist epistemological philosophy, which is particularly suited for examining causal relationships between variables and for quantifying the strength of these relationships variables (Creswell, 2009; Easterby-Smith et al., 2015). The study aims to investigate how managerial competence affects organisational performance and innovation within SMEs—concepts that can be operationalised and measured. Positivism offers an appropriate framework for conducting objective and systematic analysis.

Accordingly, a descriptive quantitative research approach has been adopted. This approach facilitates the structured collection and statistical analysis of data, allowing for the identification and description of patterns and relationships related to managerial competence and its impact on SME outcomes. Quantitative methods enable precise measurement of key

variables, such as managerial skills and innovation levels, thereby providing empirical evidence to test the hypothesised linkages established in prior studies (Bakare et al., 2024; Chikwe & Biriowu, 2019; Dabić & Kraus, 2023; Fonceca et al., 2017; Jones et al., 2024; Łobos et al., 2020; Quansah et al., 2022; Sibiya et al., 2023; Yuwono et al., 2024).

Furthermore, the descriptive quantitative design is consistent with the study's theoretical purpose, which is to explain and quantify the influence of managerial competence on SME performance. This methodological choice supports the generation of findings and delivers actionable insights relevant to policymakers and SME stakeholders who seek to strengthen managerial capabilities and promote sustainable economic growth. Thus, a descriptive quantitative research approach is adopted, based on the method of data analysis and purpose of theory, as discussed below.

Statistical analysis of data: This study adopts statistical structural equation modelling (SEM) in the analysis of the collected field data for cause-effect regression study, correlation between variables and factor analysis. First, cause-effect research, as applicable in this study, is conducted using a quantitative research approach which allows the analysis of large numerical data for deductive conclusion and generalisability of findings to the study population (Easterby-Smith et al., 2015; Saunders et al., 2019). Second, correlation studies as also applicable in this research are achieved by adopting a descriptive quantitative research approach through the use of statistical applications to examine the strength of the relationship between variables. Third, factor analysis enabled the discovery of underlying structures of the dimensions of each concept and the high-rating factors that influence both regression and correlational studies.

Purpose of Theory: This study develops a theoretical framework and hypotheses from the literature review. Unlike qualitative methods where the focus is the development of new theories, the quantitative approach develops a theoretical framework from existing theories and

designs hypotheses to test the theories with a focus on the research phenomenon and construct (Saunders et al., 2019). Thus, the process of inquiry is predetermined, and the researcher is distant from the process, as applicable in this study.

Population and Sample of the Research Study

The target population for this study comprises workers employed in Small and Medium Enterprises (SMEs) within the Nigerian oil and gas industry in Port Harcourt. Estimating the exact population size is challenging due to limited centralised data on SME employment in this sector. While the exact number of workers in small and medium enterprises (SMEs) within Nigeria's oil and gas industry remains unknown, studies suggest individual projects can involve over 100 (Alladi & Iyyunni, 2015). This workforce size naturally fluctuates based on project demands. This research focuses on 10 SMEs in the industry, while adhering to the definition of SMEs having 10 to 250 employees.

The study aims to explore the relationships between managerial competence, managerial effectiveness, and team cohesion. Additionally, it examines how uncertainty management moderates this relationship, with team cohesion also acting as a mediator between managerial competence and effectiveness. The selection of six SMEs was guided primarily based on accessibility, willingness to participate, and their relevance to the industry. In the oil and gas industry in Port Harcourt, the total number of SMEs is not known due to the absence of a centralized and comprehensive database. As a result, probability-based firm-level sampling was not feasible.

The target population of the study comprised employees of SMEs operating within the oil and gas industry in Port Harcourt. Data were collected at the individual employee level rather than the firm level. For Structural Equation Modelling (SEM), a sample size between 160 and 300 respondents is considered adequate, consistent with established guidelines in Memon et al. (2020).

Although workforce figures published by the Nigerian Content Development and Monitoring Board reflect overall industry employment of 15,266 employees (NCDMB, n.d.), they do not disaggregate SME employees and therefore could not be used to define the SME population. The selected SMEs were thus considered appropriate access points for reaching respondents who adequately represent the target population.

A random sampling process was employed to select participants, who provided their emails for the distribution of the link to the online survey tool. This involves using gatekeepers, such as managers or supervisors, to identify potential participants with the adopted selection criteria.

Sample Size Estimation

The study employed simple random sampling to select participants from six Small and Medium Enterprises (SMEs) within the Nigerian oil and gas industry. Port Harcourt was chosen as the study location due to its high concentration of oil and gas activities. To construct the sampling frame, SMEs were initially contacted to verify their business type, staff strength, and involvement in the oil and gas sector. Securing access proved challenging, as only six SMEs granted permission to engage their employees. Upon approval, the Managing Directors referred the researcher to gatekeepers, including project managers, supervisors, and HR managers, who facilitated access to employee lists.

The recommended range for SEM studies is generally between 160 and 300 datasets (Memon et al., 2020). This is because SEM relies on robust statistical techniques that require a certain amount of data for accurate parameter estimation. The research investigates the moderating effect of uncertainty management on the relationship between 10 factors and 12 variables. While the suggested sample size range is a good starting point, the complexity of the model might necessitate a larger sample size for reliable results.

The final sample size of 211 respondents was determined using G*Power software (Erdfelder et al., 2009; Faul et al., 2007), based on a power analysis suitable for Structural Equation Modelling (SEM). This procedure relied on the deviation of the squared multiple correlation (R^2) from zero, which estimates the minimum number of observations required to detect effects in a multivariate model. The statistical assumptions included a power level ($1 - \beta$) of 0.80, ensuring an 80% probability of detecting a true effect, and an alpha level (α) of 0.05 to control the probability of Type I error. The effect size (f^2) was initially set at 0.15 (small), representing the minimum recommended for a larger SEM sample of 374, but following a pilot study that confirmed satisfactory reliability for all constructs (Cronbach's alpha > 0.70), it was increased to 0.25 (medium) to reflect stronger expected relationships as recommended in Cohen (1988). The analysis included a total of 84 observed variables, reflecting the moderating effect of uncertainty management on team cohesion. Based on these parameters, G*Power calculated a minimum required sample size of 211 respondents, which is considered sufficient to provide stable and reliable parameter estimates for SEM.

To account for potential non-responses, an additional 50 questionnaires were distributed, bringing the total number of questionnaires to 261. As detailed in the literature (Cohen, 1988), R-squared values of 0.25 to 0.30 are adequate for conservative study.

Materials/Instrumentation of Research Tool

The data collection tool was designed based on the key concepts and hypotheses outlined in the study. Using the theoretical background established from relevant literature, the following explanation details the research framework. Measuring variables is fundamental to any research project, and it goes hand-in-hand with designing a strong research plan. Measurement dictates the type of data collection methods you choose. Good research hinges on validity (truly measuring what you intend to) and reliability (getting consistent results if you repeat the study). Precise measurement helps achieve both. The reliability and validity of the

instrument was ascertain using a pilot study of 50 participants. Reliability and validity values ensured that the survey tool was accurate and consistently measured the expected outcome. The ability of SEM to predict similar outcomes using out-of-sample data depends on internal consistency reliability. This was assessed using Cronbach's alpha, which estimates reliability based on the intercorrelations among the measured variables for each construct (Hair et al., 2017)

Operational Definition of Variables

For this study, the operational variables and their definitions for the four key concepts are drawn from the theoretical framework discussed in Chapter 2, as outlined below (**Table 3.1**). Providing operational variables and their definitions is necessary for several reasons as discussed in the literature (Creswell, 2009; Saunders et al., 2019; Sekaran & Bougie, 2016).

Table 3.1

Related Theories

Theory	Related Research Concept	Operational Definition
Action and Job Performance (Boyatzis, 1982, 2008)	Managerial Competence; Managerial Effectiveness	Competency plays a vital role in the performance of managers
Self-efficacy theory (Bandura, 1997)		Managerial competence and effectiveness play a significant role in organizational performance
Social Comparison Theory (Festinger, 1954)	Team Cohesion	People evaluate themselves by comparing with others to assess abilities, traits, or opinions.
Cognitive Theory (Bandura, 1986)		People learn from observing others, incorporating social influences, cognition, and behaviour to shape attitudes and actions.
Self-Categorization Theory (Tajfel & Turner, 1979)		Individuals categorize themselves into different social groups, influencing their behavior and perception of others based on the shared characteristics of those groups.
Social Identity Theory (Tajfel & Turner, 1979)		Individuals classify themselves and others into social groups, influencing behaviour, attitudes, and intergroup relations.
Role theory (Rizzo et al., 1970)	Uncertainty Management	Role conflict occurs when there are conflicting expectations within a person's roles, while role ambiguity arises when individuals are uncertain about what is expected of them.

Clarity and precision ensure that each concept is clearly defined and understood in the context of the study, eliminating ambiguity. Consistency allows for the consistent application and measurement of concepts throughout the study, ensuring that all researchers and readers are on the same page. Replicability is achieved through clearly defined operational variables, enabling other researchers to replicate the study, which is a fundamental aspect of scientific research.

To maintain validity and reliability, it is important that the variables used in the study closely match the concepts they are meant to represent. In addition, linking the operational definitions to the relevant theories helps ensure that the study is based on existing research. This provides a strong basis for analysing and interpreting the findings.

Managerial Competence

The survey uses a 5-point Likert scale to assess managerial competencies across six areas. Respondents rate each statement from 1 (Strongly Disagree) to 5 (Strongly Agree). This approach is based on established research tools that support the reliability and consistency of the measures. The study focuses on six main areas of managerial competence: (1) Efficient Decision-Making, (2) Resource Optimisation, (3) Adaptability and Flexibility, (4) Effective Leadership, (5) Problem-Solving, and (6) Relationship Management. Each variable in this study is clearly defined and measured using survey items that are adapted from established and validated instruments. The data was analysed using Structural Equation Modeling (SEM).

Efficient Decision-Making refers to how managers recognise issues or opportunities and address them effectively. This construct is measured using survey responses on a scale from 1 (Strongly Agree) to 5 (Strongly Disagree). The items are designed to evaluate how well managers assess risks, choose appropriate strategies, and make informed decisions. Questions covers areas such as risk evaluation, the extent to which managers involve employees in decision-making, and efforts to build a cohesive team. The approach follows the frameworks

proposed by Daft (2012) and Wu et al. (2017), who emphasise the importance of strategic decision-making for long-term organisational success.

Resource Optimisation describes how efficiently managers use resources to meet organisational goals. Like the previous variable, it is measured on a 1 to 5 scale, where 1 indicates strong disagreement. Survey items examine how managers manage human, financial, and technological resources to enhance output. This includes encouraging employees to take on various roles, recognising individual strengths, and providing access to tools and training. The concept builds on findings from Badiru and Osisanya (2013) and (Yang, 2016), who discuss the significance of resource use in improving performance and competitiveness in small and medium-sized enterprises (SMEs).

Adaptability and Flexibility relate to how managers respond to change and promote a culture that can adjust to shifting circumstances. This variable is also assessed on a 1 to 5 scale. The items focus on how managers promote open dialogue, use incentives to encourage flexible work behaviour, and respond to challenges associated with long-term planning and uncertainty. Research by Cameron and Quinn (2011) and Umuteme (2024) indicates that businesses operating in fast-changing environments benefit significantly from encouraging adaptability and flexibility. These qualities help companies stay ahead of the competition.

Leadership plays a vital role in helping organisations achieve their objectives. This is measured on a scale from 1 to 5, based on how well managers support innovation, develop employee skills, encourage teamwork, and remain open to feedback. Survey questions focused on how managers support new ideas, manage talent, promote collaboration, and listen to suggestions. Studies by (Northouse, 2019) and Sangka et al. (2019) point to the positive effects of strong leadership on staff motivation, involvement, and overall performance.

Problem solving refers to a manager's ability to spot issues, find their causes, and take effective action. Also rated from 1 to 5, this measure looks at how managers inspire staff to

share ideas, try creative approaches, and embrace new ways of thinking. The survey included items on encouraging suggestions, trying out innovative ideas, and staying open to alternative solutions. The definition is guided by the work of Daft (2012) and Podsakoff et al. (2000), who stress the role of innovation-friendly cultures in improving problem-solving, especially in small and medium-sized enterprises (SMEs).

Relationship management is about how well managers connect with employees, customers, suppliers, and other key groups. This is also rated on a 1 to 5 scale, assessing communication skills, ability to resolve conflicts, and efforts to strengthen stakeholder relationships. Survey items asked about feedback use, employee satisfaction with relationship efforts, and how managers deal with stakeholder disagreements. Daft (2012) and Sangka et al. (2019) highlight the value of strong stakeholder relationships for long-term success in SMEs.

Managerial Effectiveness

This study looks into four key areas of managerial effectiveness and how they relate to the survival of small and medium-sized enterprises (SMEs) in Nigeria. To gather the research data, the researcher adopted a 5-point Likert scale (ranging from 1 for Strongly Disagree to 5 for Strongly Agree) to assess how managers perform in these areas. The survey questions were developed to reflect each of the four dimensions. Structural Equation Modelling (SEM) was used later to examine how these areas are connected.

The first, Results-Oriented Dimension, focused on how well managers can set goals, make decisions, and communicate clearly. It includes four questions about setting clear goals, keeping track of progress and making changes when needed, making timely decisions, and effectively sharing goals and updates with others. This part of the study is based on the ideas espoused in the literature (David, 2011; Jones & George, 2016), where the authors emphasised the breakdown of complex strategies into smaller steps, monitoring progress, and sustaining open communication.

The second, Efficient Task Organisation, is about how managers manage their time, delegate work, use resources, and apply project management methods. This dimension also includes four questions in the following areas: how well managers prioritise their tasks, delegate based on team strengths, allocate resources, and use project tools. The definition and approach to this area are guided by common themes found in project management literature.

Teamwork, which is the third dimension, looked at a manager's ability to lead and support team collaboration. It covers aspects such as setting a good example, motivating team members, offering direction, and encouraging shared leadership. Four questions are used to measure this, and the ideas behind this part come from the literature (Al-Rawi, 2008; Goleman et al., 2013; Odonkor et al., 2024; Robbins & Judge, 2024), where the authors discussed leadership qualities that promote strong team dynamics and collaboration.

The final area, Relationship-Building, focuses on how managers handle conflicts, communicate with others, show emotional awareness, and encourage cooperation within the team. It is also measured with four questions, covering: conflict resolution, listening skills, emotional intelligence, and efforts to support teamwork. This part is informed by studies on communication, emotional intelligence, and conflict resolution (Adham, 2023; Analoui, 1999; Analoui et al., 2010; Bakare et al., 2024; Fonceca et al., 2017; Yuwono et al., 2024).

Data for the study was collected from staff in Nigerian SMEs through a survey. The questions are adapted from the literature to make sure the results are reliable and meaningful. The four areas, Results-Oriented, Efficient Task Organisation, Teamwork, and Relationship-Building, are considered essential for the success of SMEs in Nigeria. Each is clearly defined based on earlier research and measured using the 5-point Likert scale. SEM was used to explore how they relate to one another and their overall influence on managerial effectiveness.

Team Cohesion

This section discussed the variable descriptions and operational definitions for the dimensions of team cohesion adopted in this study, covering both task and social cohesion. All variables was operationalised using a 5-point Likert scale where respondents rate their agreement with statements related to each dimension of task and social cohesion: 1 - Strongly Disagree, 2 - Disagree, 3 - Neutral, 4 - Agree, 5 - Strongly Agree. This consistent measurement approach ensures that each variable is assessed uniformly, allowing for robust analysis using Structural Equation Modelling (SEM). This study aims to provide comprehensive insights into the relationship between managerial competence and team cohesion, offering valuable implications for SMEs seeking to enhance their workforce's productivity and collaborative effectiveness.

Task Cohesion Variables

The following outlines the measured variables of task cohesion and their operational definitions:

Communication is defined as the frequency and quality of information sharing and feedback among team members. This variable was measured at the interval level, using a 5-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). Survey items assessed the perceptions of the regularity, clarity, and effectiveness of communication within the respondent's team, based on the operational definition provided by Salas et al. (2015).

Goal Clarity refers to the clarity and understanding team members have about project goals. It was measured at the interval level with a 5-point Likert scale. Survey items asked team members to rate their agreement with statements about their understanding and alignment with the objectives of the team, following the operationalisation in Chapter 2.

Role Clarity measures team members' comprehension of their roles within the team. This variable, also measured at the interval level, used the same 5-point Likert scale. Survey

items evaluated team members' understanding of their specific roles and responsibilities, as defined by Salas et al. (2015).

Cooperation and Collaboration assesses the extent of teamwork, mutual assistance, and joint problem-solving among team members. It was measured at the interval level using a 5-point Likert scale. According to Landy and Conte (2009), this variable was evaluated through survey items that capture the collaborative efforts and mutual support within the team.

Trust and Support reflect the level of trust and psychological safety within the team. Measured at the interval level using a 5-point Likert scale, this variable was assessed through survey items that evaluate the degree of trust, safety, and support perceived by team members, based on the definitions by Salas et al. (2015).

Conflict Resolution evaluates how conflicts are managed within the team. This variable was measured at the interval level with a 5-point Likert scale. Survey items assessed the effectiveness and constructiveness of conflict management strategies, in line with the operationalisation by Salas et al. (2015).

Social Cohesion Variables

The following outlines the measured variables of social cohesion and their operational definitions:

Social Interaction pertains to the frequency and quality of social interactions among team members. Measured at the interval level using a 5-point Likert scale, this variable was assessed through survey items evaluating the regularity and quality of social activities and interactions, as defined by Salas et al. (2015).

Trust and Belongingness measures the level of trust and sense of belonging among team members. Using the same interval measurement and 5-point Likert scale, this variable was evaluated through survey items that measure the perceived trust and sense of belonging within the team, following the operationalisation by Salas et al. (2015).

Shared Values and Norms assesses the alignment of beliefs and attitudes within the group. Measured at the interval level with a 5-point Likert scale, this variable was evaluated through survey items that measure the degree of alignment in values and norms among team members, as described by Salas et al. (2015).

Empathy and Support evaluate the willingness of team members to listen, understand, and provide assistance to one another. This variable was measured at the interval level using a 5-point Likert scale. Based on Salas et al. (2015), survey items assessed the extent to which team members exhibit empathy and support within the team.

Inclusion and Diversity pertain to the acceptance of diverse perspectives and backgrounds within the team. Measured at the interval level with a 5-point Likert scale, this variable was evaluated through survey items that assess the acceptance and integration of diverse perspectives, as defined by Salas et al. (2015).

Conflict Management assesses how conflicts are handled within the team, emphasising constructive resolution and positive relationship maintenance. This variable was measured at the interval level using a 5-point Likert scale. Survey items evaluated the effectiveness and constructiveness of conflict resolution strategies, following the operationalisation by Salas et al. (2015).

Uncertainty Management

In this study, the dimensions of uncertainty management within small and medium-sized enterprises (SMEs) are examined under Role Ambiguity and Role Conflict, as discussed further below.

Role Ambiguity Variables

This was achieved through six key measures. Firstly, *Role Clarity Perception* assesses individuals' understanding of their roles within the SME, including their responsibilities and expectations. This variable operates on an interval measurement level, with scores ranging

from 1 (Strongly Disagree) to 5 (Strongly Agree), as determined by survey items capturing perceptions of role clarity.

Secondly, *Role Overlap* evaluates the extent of redundancy or overlap in roles within the SME, indicating potential confusion stemming from multiple individuals or departments having similar responsibilities. Similar to Role Clarity Perception, this variable also utilises an interval measurement level with the same Likert scale for variation.

Thirdly, *Communication of Roles* measures the effectiveness of role communication within the SME, focusing on how well the organisation communicates roles, responsibilities, and expectations to its employees. Scores on this variable can vary from 1 to 5 on the Likert scale, reflecting perceptions of communication effectiveness.

Performance Evaluation assesses the clarity and alignment of performance evaluation criteria within the SME, determining whether employees understand how their performance was assessed and what is expected of them. Like the previous variables, it operates on an interval measurement level with a range of scores from 1 to 5.

Decision-Making Authority examines the level of decision-making authority granted to employees within their roles, indicating whether they have the autonomy and power necessary for effective task execution. This interval measurement level for this measured variable aligns with the Likert scale, ranging from 1 to 5.

Lastly, *Feedback and Support* evaluate the availability and effectiveness of feedback and support mechanisms within the SME, including regular performance feedback and role clarification. Scores on this variable are also measured on an interval scale, mirroring the Likert scale used in the previous measures.

In addition to these dimensions of uncertainty management, the study also addresses Role Conflict which may arise from various factors such as task relevance, authority delineation, clarity in job objectives, effective time management, and role responsibility clarity.

Survey items pertaining to these aspects contribute to the operationalisation of this variable, which also utilises an interval measurement level with a Likert scale ranging from 1 to 5.

Role Conflict Variables

This variable captures the psychological state experienced by individuals within an organisation when they confront incongruity or tension between different facets of their roles, leading to internal conflict, confusion, and stress. This phenomenon can manifest in various forms, including conflicts related to task relevance, authority delineation, clarity in job objectives, effective time management, and role responsibility clarity. These dimensions are operationalised and discussed as follows.

Task Relevance: Participants' perceptions of task relevance incongruence was evaluated through survey items. They rated the degree to which they are required to engage in tasks unrelated or non-essential to their primary role using a Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

Authority Delineation: Survey items evaluated participants' perceptions of authority delineation conflicts within the organisation. They expressed their level of agreement or disagreement regarding the clarity of decision-making power and the extent of authority overlap with others using a Likert scale.

Clarity in Job Objectives: Participants' comprehension of their job objectives was measured through survey questions. They assessed the clarity of their job objectives and expectations using a Likert scale, reflecting their agreement or disagreement with statements concerning the precision of their role expectations.

Time Management: Survey items assessed the perceptions of participants' on timely management of conflicts. Also, they indicated the extent to which conflicting deadlines and priorities impact their ability to manage time effectively, expressing their agreement or disagreement on a Likert scale.

Role Responsibility Clarity: Participants' perception of role responsibility clarity was evaluated through survey questions. They rated the clarity of instructions regarding their role responsibilities using a Likert scale, indicating their agreement or disagreement with statements concerning the clarity and consistency of directives.

Each dimension of role conflict was operationalised using validated survey items designed to capture participants' perceptions of conflict within specific contexts. Responses was analysed quantitatively to assess the prevalence and impact of role conflict within the organisation, offering insights into areas requiring improvement to mitigate conflicts and enhance organisational effectiveness.

Study Procedures and Ethical Assurances

Provisional approval was received from Unicaf University in Zambia Research Ethics Committee (UREC) to commence this study on the 4th of August 2022, and final ethics approval before the field data collection was received on the 13th of June 2024. For data privacy due to the need to sustain confidentiality and anonymity, all retrieved data did not contain personal information, secured with strong passwords, and retained only for a limited time of one year after the study before securely disposed according to best practices

Study Procedures

The study participants ranged in age from 25 to 60 and were recruited from organisations within the Niger Delta region. The research adhered to the ethical codes and procedures established by Unicaf University in Zambia. This study employed a multi-stage sampling approach to gather data from project team members with relevant experience in the oil and gas industry. Details of the study procedure is discussed as follows. The research focused on individuals involved in various construction aspects of the oil and gas sector. These participants had diverse skills and experience levels relevant to the field, and they functioned within a dynamic work environment.

Determining the total population size and characteristics proved challenging. However, based on information from the Nigerian Content Development and Monitoring Board (NCDMB), the oil and gas industry workforce in Nigeria is primarily young adults, with 70% falling between 21 and 40 years old. The data also shows a significant gender difference, with 81% male and only 19% female. Furthermore, the literature (NCDMB, n.d.) indicates that nearly the entire workforce, 98%, is comprised of Nigerian nationals, with only 2% expatriates. This dominance of Nigerians in the industry justifies the decision to focus solely on Nigerian respondents for this study

Also, due to the specific requirements of the study, primary data collection was chosen. The sample frame consisted of individuals with at least one year of experience working on construction projects within the industry.

Several factors were considered when determining the sample size, including the confidence interval, the level of variability within the population, and a minimum R-squared value (set at 0.25). An alpha level of 0.05 and a power of 0.8 were employed to minimise errors. While the hypotheses were stated as one-tailed with an emphasis on a positive relationship between variables, a two-tailed analysis was used during testing. This approach accounted for the possibility of a relationship in the opposite direction and also helped to increase the sample size..

Finally, a survey instrument was distributed to gatekeepers working at oil field project installations. These gatekeepers were instructed to send the survey on to participants who fulfilled the inclusion criteria, which required a minimum of one year of experience

Ethical Assurances

The ethical principles usually considered during all research include beneficence, non-maleficence, respect for participants' rights, and justice.

Beneficence: Beneficence comprises of two elements that: (1) ensures participants are not harmed in anyway during the research; and (2) maximising the benefits of the research and minimising the harm (Bordens & Abbott, 2018). In other words, beneficence advocates that the well-being of the participants must be always protected. Consequently, any form of emotional or psychological trauma on the participants must be avoided. If the interview must include questions that are emotionally sensitive, the researcher must provide a list of available places to seek counselling resources.

Non-maleficence: Harm of any form to participants must be avoided. As an associated risk, harm has the potential to negatively impact on emotional and psychological well-being, physical or mental health, or the ability for social or group belongingness (Saunders et al., 2019). Hence, a suitable research method must be adopted to ensure non-maleficence. Since harm can also come from not ensuring anonymity, it is best to have research done with non-disclosure of a participant's identity, especially in qualitative research. However, even in computer-aided data collection, the IP address of the participants' computer can be identified. Hence, there is a need to always ensure anonymity. It has the potential of improving participants' willingness to participate in the research (Easterby-Smith et al., 2015; Surmiak, 2018).

Respect for the rights of participants: The rights of the participants include informed consent, right to participate and withdraw during the study (even when at the period of reporting), no form of coercion or pressure to provide information, and the rights to their privacy (Saunders et al., 2019). Therefore, it is the social responsibility of the researcher to respect the rights of their participants. The rights of participants varies from one study to the other. Hence, with a good risk analysis and review by ethics committee, these rights are identified and respected.

Justice: Justice ensures that there is equal weighting of the burdens and benefits of the research between the researcher and the participants (Bordens & Abbott, 2018). Implying that the participants have access to justice when their rights have been violated (Cannella & Lincoln, 2018). To address this, the need for confidentiality and anonymity have been discussed extensively in the literature (Surmiak, 2018). If anonymity is not possible, there must be a signed agreement (without coercion) by the participant (Saunders et al., 2019).

Adopted Ethical Behaviour

The following actions were adopted to ensure good ethical behaviour during the entire research process: (1) All activities conducted during the study received ethical approval from UREC to ensure the protection of the rights and welfare of all human participants, irrespective of whether such review is deemed necessary for the study. (2) Emphasis is placed on designing research studies with low risk by thoroughly assessing available data collection options.

This study is considered minimal/low risk because participant activities do not pose risks greater than those encountered in their daily routines. (3) The need to maintaining anonymity and avoid questions that could potentially increase emotional or psychological trauma for participants was ensured throughout the study. Participants was informed about data handling procedures and how data was securely disposed of. (4) When dealing with information concerning vulnerable populations, such as individuals with disabilities or learning difficulties, researchers may opt to interview spokespersons or expert informants instead. However, there will be no discrimination based on disabilities; as long as the participant is capable of reading and writing and can successfully complete the questionnaire online. (5) This study did not involve prisoners hence there was no need for further security scrutiny. (6) Parental consent is mandatory for studies involving children prior to commencement. All participants recruited for this study was able to provide self-consent. (7) All research

endeavours adhered to a process of online informed consent, with the primary goal of documenting the specific ethical dimension of the process.

Data Collection and Analysis

Data Collection

Saunders et al. (2019) outline various quantitative data collection methods, including: (1) experimental study where researchers control variables and observe how they change over time, (2) structured observation where researchers observe participants' behaviour in a controlled setting, (3) secondary data analysis where existing data is used to examine relationships between studied variables, and (4) surveys which is ideal for collecting data from a large group of people at a single point in time. This study utilised the fourth approach which is surveys, due to the unique concepts under investigation. The study gathered primary data through extensive participants' survey with closed-ended, ordered scale questions based on the operationalised dimensions of the four key study concepts (managerial competence, managerial effectiveness, team cohesion and uncertainty management). This adopted approach is to ensure objective results and practical applicability even while not aiming for generalisability.

To achieve the goals, a structured, the study primarily employed close-ended questions to facilitate quantitative analysis using Structural Equation Modeling (SEM), which requires numerical data to test relationships among constructs. While open-ended questions can provide richer, more nuanced insights, their inclusion was limited by the positivist research approach, study design, and large sample size, which would have made coding and analysis challenging. Future research could adopt a mixed-methods approach, incorporating open-ended questions or interviews to complement quantitative findings and deepen understanding of managerial competence, team cohesion, and SME performance. A final estimated sample size of 211 participants was deemed sufficient considering the average project team size of 100 in the

industry (Alladi & Iyyunni, 2015), and a previous empirical study on managerial capability and operational performances in SMEs also adopted 210 sample size for the SEM (Ali et al., 2019).. Additionally, the survey collected demographic and project experience data, with demographics used to understand potential cultural influences on the results. A pilot study of 50 participants was conducted to understand the reliability of the survey instrument. This figure represents approximately 24% of the final sample size of 211. This proportion falls within commonly accepted ranges for pilot testing in quantitative research and is sufficient for assessing instrument reliability rather than hypothesis testing.

The primary justification for using 50 respondents is methodological. Pilot studies are intended to test the clarity, reliability, and internal consistency of measurement instruments, not to estimate population parameters. In the context of PLS-SEM, reliability assessment can be effectively conducted with relatively small samples, and prior studies indicate that samples of around 30–50 respondents are adequate for pilot testing. Bujang et al. (2024) suggests that a minimum of 30 respondents is sufficient for pilot studies involving reliability analysis, while Kunselman (2024) recommends a pilot sample size of approximately 20 for detecting small effect sizes.

Additionally, the pilot study was conducted within SMEs with an average workforce size of about 50 employees, which provided a practical and contextually relevant setting for testing the questionnaire. The pilot results produced Cronbach's alpha values greater than 0.70 for all constructs, confirming acceptable internal consistency and supporting progression to the full-scale study.

Data Analysis

Data analysis is a scientific and meticulous process that underpins many research fields (Hair et al., 2017). It relies heavily on statistics, mathematical relationships, accurate data measurement, logical reasoning, established theories, and hypothesis testing. Additionally,

experience with data, the analyst's intuition, and the specific field of study all play a role. Statistics are particularly valuable in quantitative studies, as they help to uncover underlying patterns within datasets. Various software applications streamline the analysis process, making it more user-friendly, efficient, and cost-effective (Hair et al., 2017).

Investigative Approach

This study employed a multi-step data analysis approach. First, descriptive statistics were used to present the percentage of demographical data. This provided insights into how the data compared with literature evidence.

Furthermore, hypotheses were tested based on the results of the Structural Equation Modelling (SEM) path coefficients. The analysis assessed the strength of relationships within the SEM model and examined the weight each dimension had within its respective concept. The quality of the SEM analysis was ensured by adhering to established guidelines highlighted in the literature (Hair et al., 2017).

Drawing on the conceptual/theoretical framework for the study, path analysis was used to explore the mediating effect of team cohesion and the moderating role of uncertainty management within the model. The software utilised in the study include – Microsoft Excel, JASP® (Team, 2020) and SmartPLS® (Ringle et al., 2015) for structural equation modelling. The rationale for selecting these specific software tools was discussed in detail later.

Descriptive Statistics

Descriptive statistics were employed to analyse and summarise the demographic and professional characteristics of the participants in the study. Data were collected through an online Google Form, which included informed consent, and covered variables such as age, gender, nationality, education level, years of experience in the industry, and duration in current job roles. These variables were selected to provide insight into the background and composition of the workforce within the Nigerian oil and gas sector.

Age data were grouped into predefined age bands and analysed using frequency and percentage distributions to identify the dominant age groups and to observe trends in workforce demographics. The distribution was then compared with publicly available national workforce data to assess the representativeness of the sample. This comparative approach was intended to contextualise the sample within the broader labour market and highlight any demographic gaps that could affect workforce sustainability.

Gender distribution was also examined using descriptive statistics to identify the proportion of male and female participants. This analysis was intended to reflect on the gender dynamics within the sector and determine how closely the sample aligned with known industry trends regarding workforce composition. Similarly, participants' nationality data were analysed to confirm whether the sample was consistent with national workforce patterns, especially in terms of local content requirements.

The education level of participants was categorised and analysed to determine the academic qualifications of the sample. This was done to assess the overall education profile of the workforce and its potential impact on skill levels and industry preparedness. Comparisons were planned with national education statistics to understand how representative or specialised the sample might be in relation to the general labour force.

In addition, participants were asked to report on their years of experience in the oil and gas industry and the duration spent in their current roles. These data were analysed using percentage distributions to understand the experience levels across the sample and to assess patterns related to career development and job mobility. The intention was to identify the extent of professional tenure and explore possible implications for training, mentorship, and organisational development within SMEs in the sector.

This descriptive approach provided a foundational understanding of the participant profile and informed the interpretation of further findings within the study.

Understanding Relationships Between Measured and Theoretical Concepts

Structural equation modelling (SEM) is a statistical technique that helps researchers understand the connections between directly measured variables and underlying concepts that can't be directly observed. It offers several advantages over traditional methods: (1) Examines complex relationships: SEM can analyse how multiple variables influence each other, including both direct and indirect effects. (2) Accounts for measurement error: SEM considers the possibility of errors in how variables are measured, providing a more accurate picture of the relationships between them. (3) Tests theoretical models: Researchers can use SEM to see if their theories about how variables are connected are supported by real-world data.

Choosing the Right SEM Approach

There are two main types of SEM: covariance-based SEM (CB-SEM) and partial least squares SEM (PLS-SEM). The best choice depends on the research question and the characteristics of the data.

PLS-SEM: This approach is well-suited for exploratory studies with smaller datasets or when the underlying structure of the data is unclear. It focuses on maximising the explained variance in the model.

CB-SEM: This approach is better for confirmatory studies with larger datasets that are assumed to follow a normal distribution. It emphasises the accuracy of parameter estimates.

Justification for PLS-SEM in this Research

This research used PLS-SEM for several reasons: (1) The study aimed to explore the potential presence of certain concepts in project teams, rather than precisely measure them. (2) The research model can be implemented in a team with relatively small sample size. (3) The population characteristics is not well known, making it difficult to assume normal distribution of data. PLS-SEM is adopted in the study of complex relationships (Hair et al., 2017).

Evaluating the Theoretical SEM Model

A well-developed SEM model should have strong measurement and structural components, discussed as follows.

Measurement Model Assessment

Reflective Constructs: These represent underlying concepts that are believed to influence the observed variables. Internal consistency, convergent validity, and discriminant validity are evaluated for reflective constructs.

Formative Constructs: These represent underlying concepts that are believed to be formed by the observed variables. Collinearity among the indicators is assessed for formative constructs.

Structural Model Assessment: This involves evaluating the overall fit of the model to the data, including the R-squared value, path coefficient significance, and overall model significance.

Interpreting Path Coefficients and Hypothesis Testing

In SEM, path coefficients represent the amount of change in the outcome variable caused by a one-unit change in the predictor variable. Hypothesis testing helps determine if these relationships are statistically significant.

Significance Testing: A t-test is used to see if the path coefficient (beta) is significantly different from zero. If the t-value is not significant ($p\text{-value} > 0.05$), the variable likely has no significant effect on the outcome.

Direction of Effect: If the beta coefficient is significant, its sign indicates the direction of the relationship. A positive beta means the outcome variable increases as the predictor variable increases. Conversely, a negative beta means the outcome variable decreases as the predictor variable increases.

Addressing Statistical Errors

Researchers use a combination of criteria to minimise the risk of making statistical errors: *Type I Error (False Positive)*: This occurs when we reject a true null hypothesis. To minimise this, a significance level (alpha) of 0.05 is typically used. This means we only reject the null hypothesis if the p-value is less than 0.05. *Type II Error (False Negative)*: This occurs when we fail to reject a false null hypothesis. To minimise this, researchers aim for a post hoc statistical power of 0.8 or greater. This indicates a high probability of detecting a true effect.

Evaluating Model Fit

A good SEM model should fit the data well. The metrics used for evaluation include: *Confidence Intervals (CI)*: The estimated values (e.g., correlation coefficients, path coefficients) should fall within the 95% confidence interval. This suggests the results are reliable. *T-statistic*: The T-statistic should be greater than the critical value (e.g., 1.690 for a two-tailed test). This also indicates a statistically significant relationship. *Predicted R-squared*: This value should be greater than 0.25, suggesting the model explains at least 25% of the variance in the outcome variable.

Chapter 3 Summary

This is a detailed study on the relationship between managerial competence, team cohesion, uncertainty management, and managerial effectiveness in SMEs within the oil and gas industry of Nigeria. The study uses a quantitative approach with a positivist epistemological philosophy to test the hypotheses using Structural Equation Modelling (SEM). Data was collected through surveys distributed to managers and employees of SMEs.

Managerial competence is investigated through six dimensions: efficient decision-making, resource optimisation, adaptability and flexibility, effective leadership, problem-solving, and relationship management. Managerial effectiveness is assessed through results-oriented, efficient task organisation, teamwork, and relationship-building dimensions.

Team cohesion is divided into task cohesion and social cohesion. Task cohesion includes communication, goal clarity, role clarity, cooperation and collaboration, trust and support, and conflict resolution. Social cohesion includes social interaction, trust and belongingness, shared values and norms, empathy and support, inclusion and diversity, and conflict management.

Uncertainty management is measured through role ambiguity, including role clarity perception, role overlap, communication of roles, performance evaluation, decision-making authority, and feedback and support.

The study aims to provide valuable insights to improve SME performance and productivity by enhancing managerial competence, team cohesion, and uncertainty management practices. This research investigates the impact of role conflict on project team members in the oil and gas industry in Nigeria. Recognising the complexities and challenges inherent in this sector, the researchers developed a comprehensive survey to measure role conflict through five specific dimensions: task relevance, authority delineation, clarity in job objectives, time management, and role responsibility clarity. These dimensions were chosen to capture the multifaceted nature of role conflict that project team members might experience, potentially affecting their performance and overall project outcomes.

Participants for this study were recruited from the Niger Delta region of Nigeria, a significant area for oil and gas activities. The focus was on individuals who had direct experience with oil and gas construction projects, ensuring that the sample was well-informed and relevant to the research context. Ethical approval for the study was obtained from UREC, ensuring that the research adhered to ethical standards and protected the rights and well-being of the participants.

The primary research question guiding this study was: "How does managerial competence impact the cohesiveness among team members in the oil and gas industry?" To

address this question, the researcher employed a survey research methodology. A total of 221 participants, all with relevant experience in the oil and gas construction sector in the Niger Delta region, participated in the study. The survey instrument was also designed to measure role conflict through five subclass: task relevance, authority delineation, clarity in job objectives, time management, and role responsibility clarity, providing a detailed understanding of the various aspects of role conflict.

For data analysis, the study utilised descriptive statistics and Structural Equation Modelling (SEM). Descriptive statistics provided an overview of the sample characteristics and the distribution of responses. SEM was employed to explore the relationships between the different dimensions. This methodological approach allowed the study to identify significant patterns and draw conclusions.

CHAPTER 4: FINDINGS

This study closes the gap in the literature of the need to provide further insight into the competencies needed by the owners of SMEs to enhance team cohesions and managerial effectiveness, and how to solve the problems associated with role ambiguity and role conflict. Therefore, the purpose of this study is to provide further insight into the direct causal effect of managerial competence (latent variable 1) on managerial effectiveness (latent variable 2) and team cohesion (latent variable 3) in SMEs, with a moderation effect of uncertainty management (latent variable 4) on the link between team cohesion and managerial effectiveness. The study is conducted in the Nigerian oil and gas industry, Port Harcourt.

This study adopts statistical structural equation modelling (SEM) in the analysis of the collected field data for cause-effect regression study, correlation between variables and factor analysis. Using the SEM, 11 hypotheses were tested. Out of these, 7 alternate hypotheses were accepted while 4 related to the moderation effect were rejected. Descriptive statistics summarised the demographic and professional characteristics of the study participants, using data collected via an online Google Form with informed consent. Variables included age, gender, nationality, education, industry experience, and job tenure to profile the Nigerian oil and gas SME workforce. Age was grouped into bands and analysed with frequencies and percentages, then compared to national workforce data to assess sample representativeness and demographic trends. Gender distribution was examined to reflect sector gender dynamics and alignment with industry trends. Nationality data checked consistency with local workforce patterns. Education levels were categorised to assess workforce qualifications and compared to national education stats for representativeness. Experience and job tenure were analysed to understand career progression and inform training and development needs within SMEs. This descriptive analysis established the participants.

Pilot Study and Instrument Reliability Check

To ascertain the reliability of the survey instrument, pilot study of 50 participants was conducted and lasted from 20th of June 2024 to 18th of July 2024. This long duration was due to the slow response from participants. Access was granted by four SMEs through the human resource managers (HRM). The reliability result using Cronbach alpha indicate that the factors for all measure variables were greater than 0.7, suggesting high instrument reliability. Exploratory factor analysis (EFA), principal component analysis (PCA) and confirmatory factor analysis (CFA), of the measured variables shows factors greater than 0.7. Also, the high Cronbach led to the increase of the effect size use for the calculation of the sample size from 0.15 to 0.25 as suggested by Cohen (1998). The final sample size of 211 was used for the study as estimated in G*Power using the effect size of 0.25 and the number of predictors, alpha level 0.05 and beta of 0.8. The highest number of predictor variables was the moderation product of the factors of team cohesion and uncertainty management.

Structural Equation Model

Data analysis was perform using structure equation modelling (SEM), as explained in the literature (Hair et al., 2019; Hair & Sarstedt, 2019; Sarstedt et al., 2019). The data for the analysis was retrieved from 221 participants, which was suitable for SEM analysis according to the literature (Memon et al., 2020). As stated earlier, the sample size of 211 was calculated using G*power software. Partial least squares (PLS) approach to SEM, which is also referred to as composite-based SEM, was adopted for this study over covariance-based SEM because the data was not normally distributed (Rigdon, 2016). The raw data was generated using online google form and extracted into Microsoft Excel. The SEM model was developed in SmartPLS software.

A simulation of 5000 subsampling was achieved using bootstrapping technique. The following parameters were retrieved, including the path coefficients, coefficients of

determination (R^2), reliability and validity values, outer loadings, and the level of statistical significance. The simulation of 5000 subsamples using bootstrapping, is to assess the stability and variability of the model. Path coefficients indicate the direct relationships between two constructs, while the coefficients of determination (R^2) is employed to assess the explanatory power of the model (Hair, 2021). Reliability and validity values ensured that the survey tool was accurate and consistently measured the expected outcome. Outer loadings are used to reveal the contribution of each measured variable of each construct to the overall model, and statistical significance is adopted to substantiate the robustness of the findings. The robustness of the SEM reflective models was assessed using the rule of thumb values provided in the literature (Hair et al., 2017).

SEM Reliability Test

The ability of the SEM to predict similar outcomes using out-of-data samples depends on the internal consistency reliability. This metric was achieved using Cronbach's alpha, where the internal consistency reliability is estimated from the intercorrelations of the measured variables for each concept (Hair et al., 2017). Although the composite reliability test provides less strict internal consistency values that are suitable for exploratory studies (Hair et al., 2019; Hair & Sarstedt, 2019; Jöreskog, 1971), the adoption of Cronbach's alpha in this study is to demonstrate the robustness of the SEM.

Table 4.1*Cronbach's Alpha Internal Consistency Reliability Check*

Constructs	Cronbach Alpha	t-Statistics >1.69	P Values <= 0.05	Cronbach Alpha > 0.7
Managerial _Competence (MC)	0.953	68.094	0.000	Yes
Managerial _Effectiveness (ME)	0.970	87.621	0.000	Yes
Role Ambiguity _Moderation on _Task and Social Cohesion	0.746	10.704	0.000	Yes
Role Conflict _Moderation on _Task Cohesion and _Social Cohesion	0.801	16.811	0.000	Yes
Social Cohesion _Mediator 2	0.938	38.345	0.000	Yes
Task _Cohesion (TCSC) _Mediator 1	0.917	28.179	0.000	Yes

As shown in **Table 4.1** the Cronbach alpha reliability values are above 0.7, suggesting a strong internal consistency within the measured variables of each concept. The closer the reliability value to 1.0, demonstrates that the questions for each concept are homogenous and provide a more accurate measure. Implying further that for reliability values > 0.9, each of the questions can actually act as a standalone measure of the phenomenon. This is beneficial for future studies and will reduce the time for completing the questionnaires.

Convergent Validity Test

The average variance extracted (AVE) is a metric for determining the convergent validity of the construct. As explained in the literature (Hair et al., 2017), the AVE must be greater than 0.5 to pass the convergent validity test. **Table 4.2**, provides the AVE values for the concepts studied in this research.

Table 4.2
Convergent Validity Check

Constructs	Average Variance Extracted (AVE)	t-Statistics >1.69	P Values <= 0.05	AVE > 0.5
Managerial _Competence (MC)	0.575	9.224	0.000	Yes
Managerial _Effectiveness (ME)	0.688	10.213	0.000	Yes
Role Ambiguity _Moderation on _Task and Social Cohesion	0.510	9.017	0.000	Yes
Role Conflict _Moderation on _Task Cohesion and _ Social Cohesion	0.612	13.687	0.000	Yes
Social Cohesion _Mediator 2	0.768	12.768	0.000	Yes
Task _Cohesion (TCSC) _Mediator 1	0.707	10.152	0.000	Yes

As shown in **Table 4.2**, the AVEs are greater than 0.5 for all the constructs, suggesting that the SEM is valid. The fact that the AVEs exceeded the 0.5 baseline value for all constructs as suggested in Hair et al. (2017), indicates that the convergent validity of the SEM is established. This indicates that the constructs in the SEM sufficiently explained the variance in their respective measured variables. With this outcome, the SEM is valid to enhance further analysis and interpretation.

Discriminant Validity Test

The Heterotrait-Monotrait (HTMT) ratio criterion assesses the discriminant validity of the constructs. Discriminant validity is present if the HTMT ratio is less than 0.9, although the HTMT can be above 0.9 for constructs that are similar in concept (Henseler et al., 2015).

As indicated in **Table 4.3**, the HTMT ratio for inter-correlation between managerial competence and managerial effectiveness is greater than 0.9, suggesting an overlap between the constructs. This is because both latent variables are conceptually related, with managerial competence positively and significantly influencing managerial effectiveness. Again, the HTMT ratio for the inter-correlations between managerial effectiveness and team cohesion (task and social cohesion), is also higher than 0.9, suggesting a strong influence of team cohesion on managerial effectiveness

Table 4.3*Heterotrait-Monotrait (HTMT) Ratio of Correlations*

Constructs	Heterotrait-Monotrait Ratio (HTMT)	HTMT < 0.9	Comments
Managerial_Effectiveness (ME) <-> Managerial_Competence (MC)	0.951	No	Related construct
Role Ambiguity_Moderation on_Task and Social Cohesion <-> Managerial_Competence (MC)	0.771	Yes	Distinct construct
Role Ambiguity_Moderation on_Task and Social Cohesion <-> Managerial_Effectiveness (ME)	0.774	Yes	Distinct construct
Role Conflict_Moderation on_Task Cohesion and_Social Cohesion <-> Managerial_Competence (MC)	0.887	Yes	Distinct construct
Role Conflict_Moderation on_Task Cohesion and_Social Cohesion <-> Managerial_Effectiveness (ME)	0.913	No	Related construct
Role Conflict_Moderation on_Task Cohesion and_Social Cohesion <-> Role Ambiguity_Moderation on_Task and Social Cohesion	0.935	No	Related construct
Social Cohesion_Mediator 2 <-> Managerial_Competence (MC)	0.854	Yes	Distinct construct
Social Cohesion_Mediator 2 <-> Managerial_Effectiveness (ME)	0.911	No	Related construct
Social Cohesion_Mediator 2 <-> Role Ambiguity_Moderation on_Task and Social Cohesion	0.800	Yes	Distinct construct
Social Cohesion_Mediator 2 <-> Role Conflict_Moderation on_Task Cohesion and_Social Cohesion	0.827	Yes	Distinct construct
Task_Cohesion (TCSC)_Mediator 1 <-> Managerial_Competence (MC)	0.883	Yes	Distinct construct
Task_Cohesion (TCSC)_Mediator 1 <-> Managerial_Effectiveness (ME)	0.935	No	Related construct
Task_Cohesion (TCSC)_Mediator 1 <-> Role Ambiguity_Moderation on_Task and Social Cohesion	0.806	Yes	Distinct construct
Task_Cohesion (TCSC)_Mediator 1 <-> Role Conflict_Moderation on_Task Cohesion and_Social Cohesion	0.947	No	Related construct
Task_Cohesion (TCSC)_Mediator 1 <-> Social Cohesion_Mediator 2	0.942	No	Related construct

Also, whereas the HTMT ratio for the inter-correlation between role conflict moderation on the relationship between either managerial competence and team cohesion is

greater than 0.9, this is not true for role ambiguity which shows higher discriminate validity. Hence, this study shows that role conflict has a higher influence on the performance of the team if present.

Summary On Reliability and Validity Check

The outcome of the internal consistency reliability assessment of the SEM suggests that the Cronbach's alpha was greater than 0.7, signifying strong internal consistency. The convergent validity check using average variance extracted (AVE), also shows that the AVEs for each construct was greater than 0.5, indicating strong convergence. Finally, the discriminant validity check using the HTMT ratio criterion indicates that managerial competence is a key determinant of managerial effectiveness. Also, team cohesion and role conflict were shown to strongly influence managerial effectiveness.

Results

Descriptive Statistics

221 participants filled out the online Google form and ticked the informed consent box. The age distribution of the 221 respondents is represented in the following age bands as show in **Figure 4.1**: 25-29 years: 10.4%, 30-35 years: 16.3%, 36-40 years: 29.4%, 41-45 years: 17.6%, 46-50 years: 14.5%, Above 50 years: 11.8%. The highest workforce group of 29.4% are in the age band of 36-40 years, which suggests the availability of experienced professionals. A similar report of the 2023 Nigerian work population (Statista., 2024), suggests the following age distribution 25-34 years: 25.3%; 35-44 years: 27.0% and 45-54 years: 19.5%. The age distribution of the study sample generally aligns with that of the population, suggesting a representative spread across age groups. The combined age group of 25–34 years in the sample closely matches the general workforce proportion (25.3%), indicating good representation of younger workers. The highest percentage of the general workforce of the age group of 35–44 is 27.0%, and is consistent with the finding that the largest group (29.4%) falls within the 36–

40 age band. Additionally, the lower percentage of the general workforce from 45–54 age group shows reasonable similarity with the sample.

The combination of workers (73.3%) in the sample who are highly experienced in the following age band: 36-40 years (29.4%), 41-45years (17.6%), 46-50 years (14.5%) and above 50 years (11.8%), suggest an opportunity for mentorship and on-the-job training. This demographic composition presents both opportunities and challenges for small and medium-sized enterprises (SMEs). The opportunities from high percentage of experienced workers offers a valuable resource for structured mentorship programs. SMEs can leverage this experience to develop internal training initiatives that facilitate knowledge transfer to less experienced or newly recruited employees. Such mentorship can help younger employees quickly adapt to organisational culture and technical requirements, enhancing productivity and retention.

The presence of seasoned professionals enables SMEs to establish robust on-the-job training systems. Experienced workers can serve as trainers or role models, helping to build skills across departments without the high costs associated with external training. On challenges, the relatively lower representation of younger employees signals a potential long-term risk for workforce sustainability. As older employees near retirement, SMEs may face skills gaps and productivity losses if adequate succession plans and talent pipelines are not in place. While experience brings value, SMEs may also need to ensure that their workforce remains adaptable to new technologies and innovative practices. Balancing experience with digital fluency and fresh perspectives—often brought in by younger employees—can be critical for competitiveness. The skewed age distribution underscores the need for SMEs to prioritise attracting younger talent. Designing a workplace that encourages career development opportunities can help make SMEs more appealing to the younger generation. This can be achieved thorough: developing formal mentorship and reverse mentorship programs; creating

succession plans and identify potential leadership candidates from younger workers; and partnering with educational institutions to establish internship.

The participants shown in **Figure 4.2**, are comprised of 75.1% (166) male and 24.9% female (55). This corroborates the literature (NCDMB, n.d.), that the workforce in the Nigerian oil and gas industry is dominated by male workers, which shows a significant gender difference, with 81% male and only 19% female. The data in **Figure 4.3**, shows that the participants were made up of 100% Nigerians. This corroborates the data from the NCDMB that 98%, is comprised of Nigerian nationals, with only 2% expatriates. The outcome of the study highlights two critical gaps in workforce representation—gender imbalance and lack of ethnic or national diversity—which strongly suggest the need for SME managers in the Nigerian oil and gas industry to develop competencies that enhance inclusion and diversity. The study underscores a pressing need for SME managers to intentionally build skills in inclusive leadership, unbiased recruitment, and diversity strategy implementation.

As shown in **Figure 4.4**, 58.4% (129) of the participants are Degree/HND holders, 28.5% (63) have Masters, 6.78% (15) are Doctoral holders, 1.36% (3) are high school certificate holders, 2.26% (5) have diplomas and 6 (2.72%) others which is outside the above classification. The outcome shows that the participants are educated and informed. This is a highly educated sample compared to the general Nigerian labour force, where 86% lack post-secondary education (Orimisan, 2024).

Since some individuals without post-secondary education work in SMEs, this limits the generalisation of the outcome of this study outside the oil and gas industry. Thus, the outcome suggest that the SMEs in oil and gas sector that does not reflect the broader understanding of SME environment in terms of educational achievements of employees as espoused in the literature. Again, this additional finding—that the study sample is highly educated compared to the general Nigerian labour force—reinforces the need for SME managers to develop

competencies in inclusion and diversity, but from a socio-educational perspective. These competencies are essential for creating equity, opportunity, and innovation in SMEs, particularly in a context like Nigeria's where access to higher education remains limited for many.

From **Figure 4.5**, the data shows that 62% (137) of the participants have 5 years and above experience in the industry, 21.7% (48) have 3-4 years of work experience and 16.3% (36) have 1-2 years of experience. This also corroborates the indication in **Figure 4.1**, that the participants have few younger new joiners. In **Figure 4.6**, most of the participants (48.4% (102)) have been in the same position for 3 years and above, 33.9% (75) in the same position for 2 years, while 17.6%(39) have stayed for a year. With a higher number (102) staying in the same role for 3 years and above could signify stagnation and limited job rotation opportunities.

Figure 4.1

Participants' Age Distribution

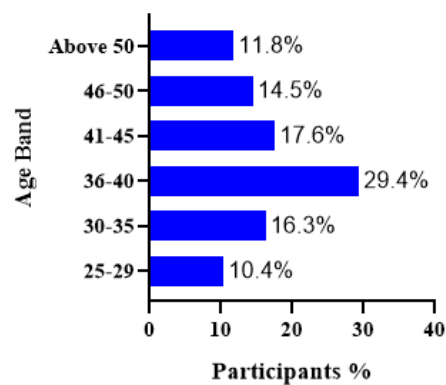


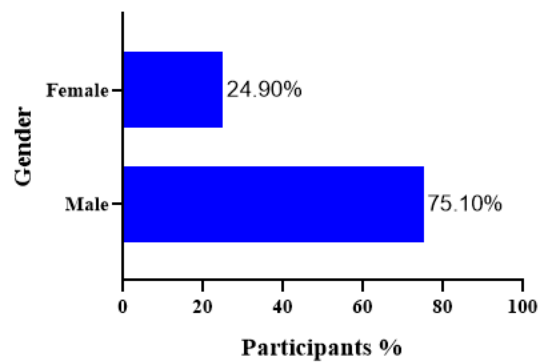
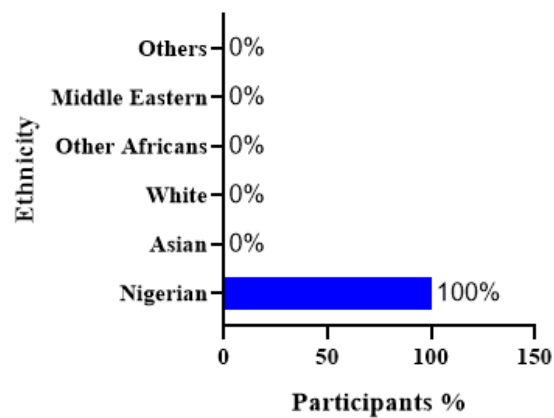
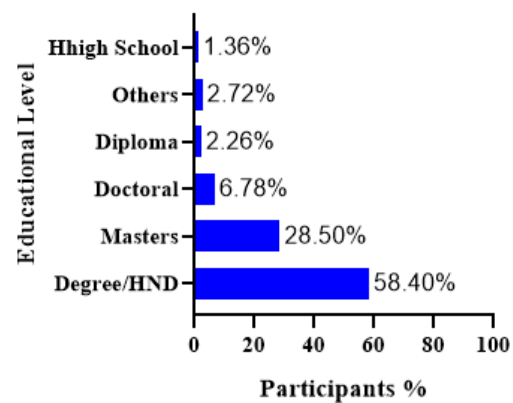
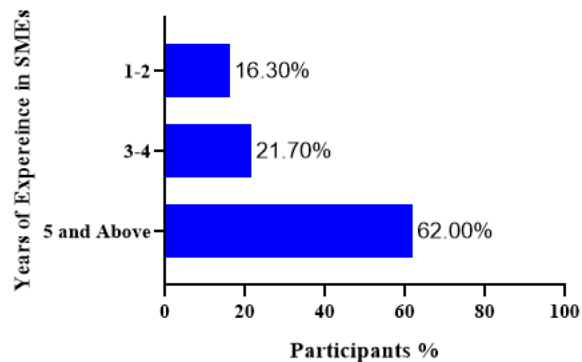
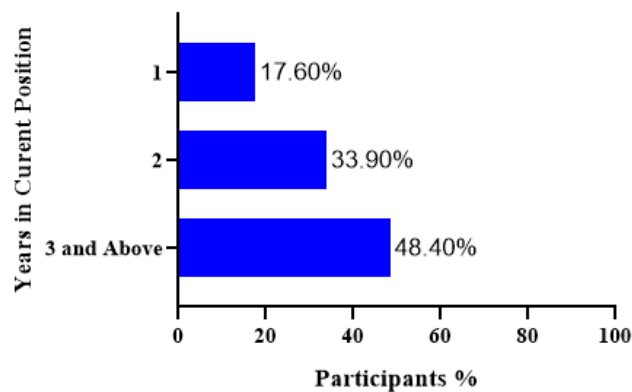
Figure 4.2*Participants' Gender Distribution***Figure 4.3***Participants' Ethnicity Distribution***Figure 4.4***Participants' Education Level Distribution*

Figure 4.5*Participants' Years of Experience Distribution***Figure 4.6***Participants' Years in Current Position Distribution*

From the descriptive analysis, the demographic and professional profile of the 221 participants reveals important insights for workforce dynamics and development of SMEs within the Nigerian oil and gas industry. The predominance of experienced workers, particularly in the 36-40 age range, underscores the wealth of knowledge within the sector. However, the lack of younger workers in the range of 25-29 years in the sample raises concerns about long-term workforce sustainability and the potential for skills gaps as the older generation of professionals approaches retirement. This gap could hinder innovation and adaptability in the industry, highlighting the need for strategies aimed at attracting and retaining younger talent.

The gender distribution, with 75.1% male participation, reflects the male-dominated nature of the sector, as noted in industry reports. While this aligns with broader trends, it suggests that more gender diversity initiatives could be needed to provide a more balanced workforce, with the potential of improving inclusivity and access to a wider gender-based pool of talent. The educational background of the participants, with a high percentage holding post-secondary certificates, indicates a well-educated workforce. This is beneficial for the overall skill level in the industry because of its strategic business needs, but also means that the findings may not fully represent the broader Nigerian labour market, where a significant portion of the workforce lacks higher education. The high levels of experience and educational attainment further point to the importance of investing in continuous professional development and mentorship programs in SMEs, particularly in light of the relatively limited job rotation observed in **Figure 4.6**.

Latent Variable Correlations

The latent variables correlation explains the strength and direction of the inter-relationships among the concepts ranging from -1.0 to 1.0. With Pearson's r values above 0.7 in **Table 4.4**, a large positive correlation is suggested between the variables being compared based on the classification in the literature (Cohen, 1988). The Structural Equation Modeling (SEM) table reveals a robust and interconnected network of relationships among various constructs, highlighting the significant influence of managerial competence and effectiveness on team cohesion.

The relationship between managerial competence and managerial effectiveness exhibits a very strong correlation, with a value greater than 0.9. This indicates a high degree of association, suggesting that managerial competence plays a substantial role in determining how effectively managers perform their roles. In other words, managers who possess higher levels of competence are more likely to demonstrate greater effectiveness in achieving organisational

goals and leading teams. This strong correlation implies that enhancing managerial competence could lead to improved managerial effectiveness, making it a critical area for development and training.

Table 4.4

Correlations for Compared Latent Variables

Constructs	Correlation Coefficient	t-Statistics >1.69	P Values ≤ 0.05
Managerial _Effectiveness (ME) <-> Managerial _Competence (MC)	0.923	34.363	0.000
Role Ambiguity _Moderation on _Task and Social Cohesion <-> Managerial _Competence (MC)	0.729	9.868	0.000
Role Ambiguity _Moderation on _Task and Social Cohesion <-> Managerial _Effectiveness (ME)	0.752	10.512	0.000
Role Conflict _Moderation on _Task Cohesion and _Social Cohesion <-> Managerial _Competence (MC)	0.790	10.371	0.000
Role Conflict _Moderation on _Task Cohesion and _Social Cohesion <-> Managerial _Effectiveness (ME)	0.806	10.720	0.000
Role Conflict _Moderation on _Task Cohesion and _Social Cohesion <-> Role Ambiguity _Moderation on _Task and Social Cohesion	0.786	12.047	0.000
Social Cohesion_Mediator 2 <-> Managerial _Competence (MC)	0.808	11.209	0.000
Social Cohesion_Mediator 2 <-> Managerial _Effectiveness (ME)	0.870	17.484	0.000
Social Cohesion_Mediator 2 <-> Role Ambiguity _Moderation on _Task and Social Cohesion	0.757	10.365	0.000
Social Cohesion_Mediator 2 <-> Role Conflict _Moderation on _Task Cohesion and _Social Cohesion	0.706	6.036	0.000
Task_Cohesion (TCSC) _Mediator 1 <-> Managerial _Competence (MC)	0.838	13.803	0.000
Task_Cohesion (TCSC) _Mediator 1 <-> Managerial _Effectiveness (ME)	0.884	19.064	0.000
Task_Cohesion (TCSC) _Mediator 1 <-> Role Ambiguity _Moderation on _Task and Social Cohesion	0.775	12.333	0.000
Task_Cohesion (TCSC) _Mediator 1 <-> Role Conflict _Moderation on _Task Cohesion and _Social Cohesion	0.818	10.820	0.000
Task_Cohesion (TCSC) _Mediator 1 <-> Social Cohesion_Mediator 2	0.875	14.899	0.000

Furthermore, from **Table 4.4**, the correlation values for all relationships between managerial competence and team cohesion task and social cohesion are greater than 0.8. This is equally applicable to the correlation values for all relationships between managerial effectiveness and team cohesion (task and social cohesion). These high correlation values

suggest that competent managers promote environments where team members collaborate effectively and maintain strong interpersonal bonds. This highlights the importance of managerial competence in creating cohesive teams that function well both in terms of productivity and interpersonal harmony.

Similarly, the relationships between managerial effectiveness and both task cohesion and social cohesion also show strong correlations above 0.8. This reinforces the idea that effective management directly contributes to the cohesiveness of teams. Effective managers are better equipped to guide teams toward common goals, ensuring that tasks are completed efficiently (task cohesion), and they also create an environment where team members feel supported and connected (social cohesion). This further underscores the pivotal role of managerial effectiveness in shaping team dynamics.

The data also revealed that all relationships with role conflict and role ambiguity are above 0.7. Role conflict occurs when individuals experience competing demands or expectations from different sources, while role ambiguity arises when individuals are unclear about their responsibilities or expectations. The relatively high correlations suggest that these negative experiences are interrelated and may be influenced by factors such as managerial competence and effectiveness. For instance, ineffective or incompetent management can lead to unclear roles and conflicting demands, thereby increasing role conflict and ambiguity among team members.

Hypothesis Testing

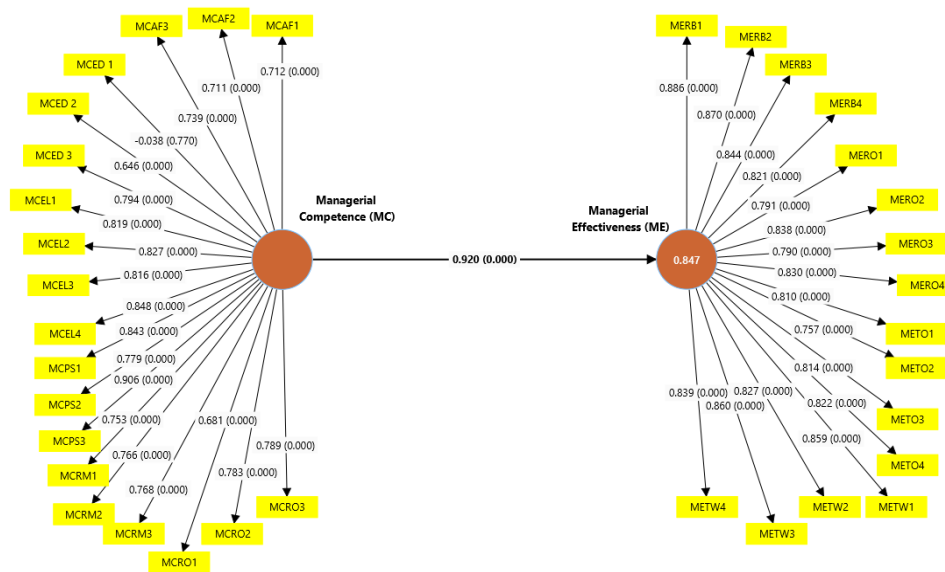
Hypothesis H1

The alternate hypothesis in H_{1a} was stated as follows: “*Managerial competence positively and significantly influences managerial effectiveness.*” The intention is to measure the strength and direction of the relationship between MC and ME, the R² value. The outcome of the simulation is presented in **Figure 4.7**, below.

From **Figure 4.7**, the path-coefficient is positive and significant at 0.920 ($p=0.000$), hence the alternate hypothesis is accepted and the null hypothesis is rejected. The coefficient of determination (R^2) is 0.847, suggesting that MC influences ME by 84.7%. This is a strong coefficient of determination according to the literature (Cohen, 1988).

Figure 4.7

Hypothesis 1: Relationship Between Managerial Competence and Managerial Effectiveness



The R^2 value of 0.847 suggest that the model accounts for a significant portion of the variance, and highlights the important influence of managerial competence on the effectiveness of managers within SMEs in Nigeria's Oil and Gas sector. These results align closely with the literature review, which emphasised managerial competence as a key driver of team performance and organisational effectiveness. The way managerial competence was defined and measured in this study—particularly its impact on team cohesion, further strengthens the observed relationship. In this light, the findings not only validate the proposed theoretical framework but also underscore the practical value of developing strong managerial skills to improve effectiveness by SMEs in this specific industry.

The acceptance of H1a aligns with the competency-based theory of managerial performance, which posits that effectiveness is a function of managers' ability to translate knowledge and skills into purposeful action (Boyatzis, 1982, 2008). Analoui (1999) and Analoui et al. (2010) similarly argue that managerial effectiveness emerges from the interaction between competence, behaviour, and task execution. Empirical evidence supports this relationship, as Diskiene et al. (2018) found a positive association between managerial roles and perceived managerial effectiveness. In SME contexts, particularly within labour-intensive and informally structured organisations, effective leadership and people management are essential determinants of managerial effectiveness (Agwu & Emeti, 2014; Milošević et al., 2019). The findings of this study therefore reinforce earlier conclusions that competent managers create productive work environments and improve managerial outcomes (Pranitasari, 2019).

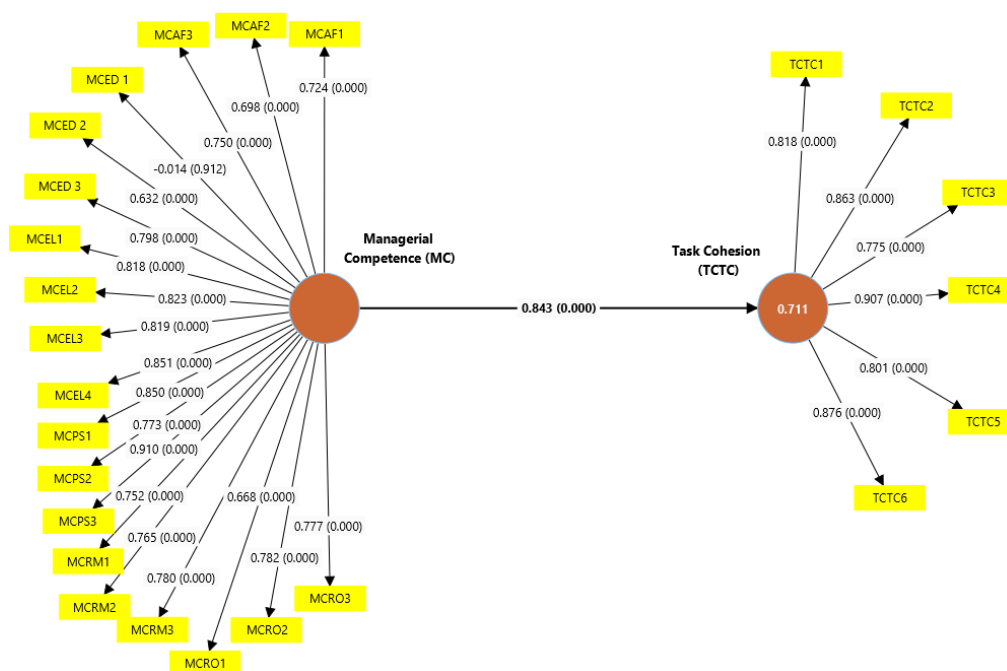
Hypothesis H2

The alternate hypothesis in H_{2a} was stated as follows: “*Managerial competence positively and significantly influences task cohesion in teamwork.*” The purpose is to examine the relationship between managerial competence and task cohesion using the R² value. The result is provided in **Figure 4.8**, below. From **Figure 4.8**, the path-coefficient is positive and significant at 0.843 (p=0.000), hence the alternate hypothesis is accepted and the null hypothesis rejected. The coefficient of determination (R²) is 0.711, suggesting that MC influences TCTC by 71.1%. This is a strong coefficient of determination according to the literature (Cohen, 1988). However, the strength of the relationship between MC and ME is stronger than that with task cohesion by 13.6%. The relationship between TCTC and ME was examined in another hypothesis (H4) to determine which of MC or TCTC has a stronger influence on ME.

The findings highlight the pivotal role of managerial competence (MC) in cultivating a work environment that supports team collaboration and cohesion, which are key elements in strengthening team dynamics within SMEs. The analysis further reveals that the association between MC and managerial effectiveness (ME) is 13.6% stronger than that between MC and task cohesion and team collaboration (TCTC).

Figure 4.8

Hypothesis 2: Relationship Between Managerial Competence and Task Cohesion



The findings highlight the pivotal role of managerial competence (MC) in cultivating a work environment that supports team collaboration and cohesion, which are key elements in strengthening team dynamics within SMEs. The analysis further reveals that the association between MC and managerial effectiveness (ME) is 13.6% stronger than that between MC and task cohesion and team collaboration (TCTC). This indicates that although both MC and TCTC contribute positively to ME, managerial competence exerts a more substantial influence. This aligns with existing research emphasising MC as a fundamental determinant of organisational performance and managerial success.

To deepen understanding of these dynamics, a separate hypothesis examined the link between TCTC and ME. This inquiry is essential for capturing the full scope of how MC and TCTC interact to shape managerial effectiveness. The literature review in Chapter 2 affirms that teams with strong cohesion tend to achieve better performance outcomes and make more effective decisions, hence underscoring the value of both individual competence and team-based capabilities in SME leadership.

The acceptance of H2a is consistent with teamwork and leadership literature, which emphasises the role of competent managers in fostering collaboration, goal clarity, and coordination. Katzenbach and Smith (1993) and Zajac et al. (2021) argue that teams characterised by strong collaboration and mutual accountability outperform less coordinated groups. Competent managers promote task cohesion by clearly communicating goals, prioritising tasks, and delegating responsibilities effectively (Buchanan & Huczynski, 2017; Bakare et al., 2024). Salas et al. (2015) further identify task cohesion as the strongest predictor of workforce productivity, supporting the strong relationship observed in this study.

Hypothesis H3

The alternate hypothesis in H_{2a} was stated as follows: “*Managerial competence positively and significantly influence social cohesion in teamwork.*” The purpose of this hypothesis is to study the relationship between managerial competence and social cohesion using the path-coefficient and R² values from the SEM, as shown in **Figure 4.9**, below.

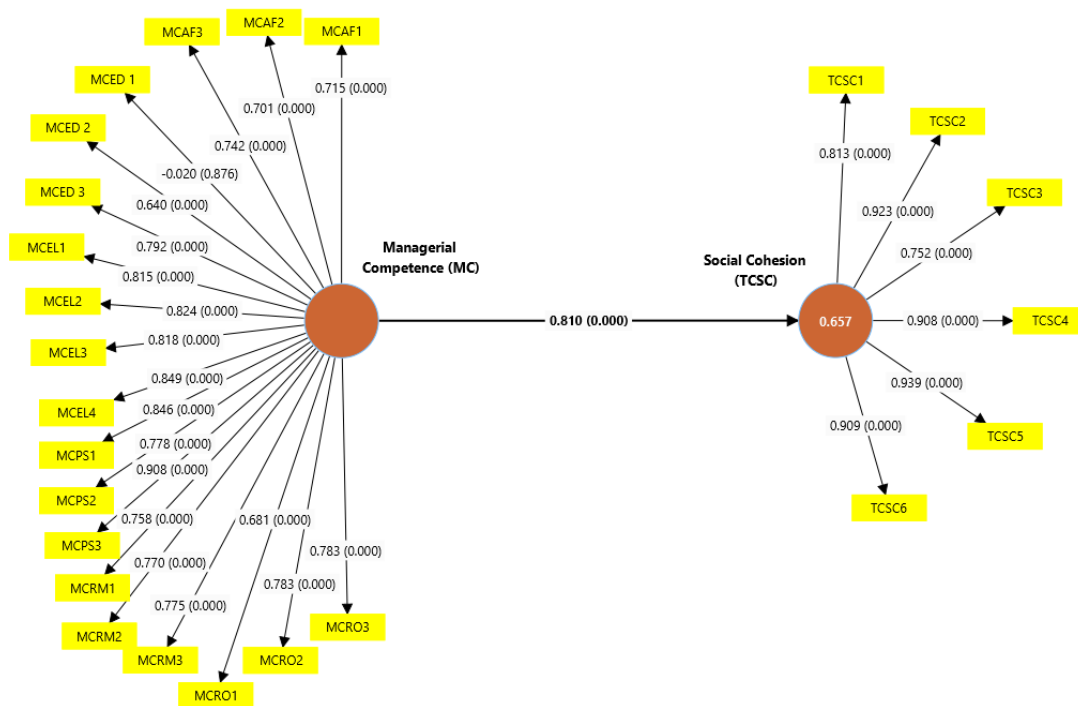
From **Figure 4.9** the path-coefficient is positive and significant at 0.810 (p=0.000), hence the alternate hypothesis is accepted and the null hypothesis rejected. The coefficient of determination (R²) is 0.657, suggesting that MC influences TCSC by 65.7%. This is also a strong coefficient of determination according to Cohen (1988). However, the strength of the relationship between managerial competence and task cohesion in H2a is stronger than that of

social cohesion by 5.4%. This is expected because the primary role of a manager is to drive production.

The literature offers compelling support for the for the outcome above on the vital influence of managerial competence (MC) in shaping social cohesion (TCSC) within SMEs operating in the Nigerian Oil and Gas Industry. A consistent theme in the literature is the key role of managerial competence in cultivating healthy team dynamics that strengthens interpersonal bonds. The evidence in H3 is clear: competent managers build socially cohesive, high-performing teams.

Figure 4.9

Hypothesis 3: Relationship Between Managerial Competence and Social Cohesion



The empirical studies reviewed in Chapter 2 provide a well-defined lens through which managerial competence is measured and understood. These works affirm that where strong management practices are in place, social cohesion within teams thrives. Beyond task efficiency, the literature distinguishes social cohesion as a uniquely responsive outcome to effective managerial outcomes. This reinforces the idea that managerial competence does more

than drive performance; it nurtures the human connections that sustain teams. Together, the findings in Hypotheses H1, H2 and H3 enhance the theoretical framework of the study by clarifying how managerial competence not only directly impacts effectiveness but also contributes to team cohesion. The results so far provide further insights into the relationships that shape managerial effectiveness in the context of SMEs operating within the oil and gas sector.

The significant effect of managerial competence on social cohesion supports social and behavioural theories of teamwork. Effective people management—identified as a core managerial competence (Sangka et al., 2019)—encourages trust, inclusion, and positive interpersonal relationships within teams. Social cohesion is strengthened when managers adopt appropriate leadership styles that enhance motivation, engagement, and job satisfaction (Northouse, 2016, 2019; Biloa, 2023; Qalati et al., 2022). Shared values and norms, shaped by managerial behaviour, contribute to group identity and cohesion (Schein, 2010; Dinh & Salas, 2017). These findings align with prior evidence that social interaction and mutual support improve team functioning in SMEs (Zaccaro & Klimoski, 2001).

Hypothesis H4

The alternate hypothesis in H4_a was stated as follows: “*Task cohesion positively and significantly influences managerial effectiveness.*” The intention is to measure the strength and direction of the relationship between task cohesion and managerial effectiveness using the R² value. The outcome of the SEM study is presented in **Figure 4.10**, below.

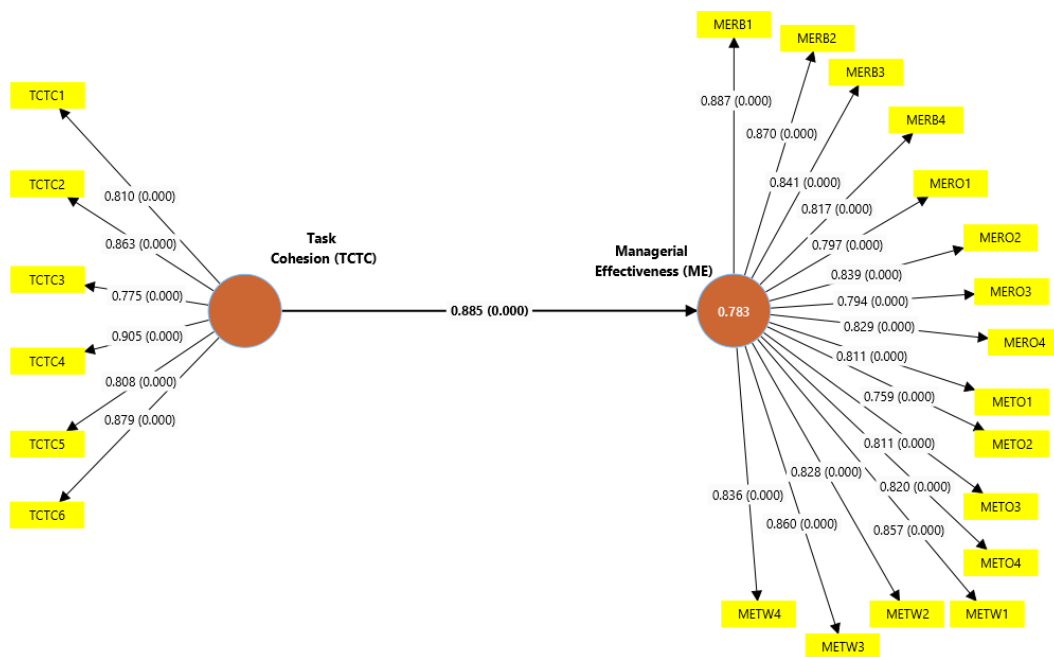
From **Figure 4.10**, the path-coefficient is positive and significant at 0.885 (p=0.000), hence the alternate hypothesis is accepted and the null hypothesis is rejected. The coefficient of determination (R²) is 0.783, suggesting that task cohesion influences managerial effectiveness by 78.3%. Again, this is a strong coefficient of determination, according to Cohen (1988). However, the strength of the relationship between managerial competence and

managerial effectiveness in H1a is stronger than that of task cohesion by 6.4%. Suggesting that managerial competence is the main determinant of managerial effectiveness.

The literature review in Chapter 2 offered a strong basis for understanding how task cohesion and managerial competence shape managerial effectiveness from H1 and H4. The review highlights the central role of team cohesion in enhancing performance, particularly within SMEs operating in the Nigerian Oil and Gas Industry. It shows that cohesive teams tend to perform better, and this team-driven dynamics directly contributes to more effective management. Studies cited reinforce the idea that team cohesion is not just beneficial but essential for achieving strong managerial outcomes.

Figure 4.10

Hypothesis 4: Relationship Between Task Cohesion and Managerial Effectiveness



The outcomes of H4 suggest how much of managerial effectiveness can be linked to task cohesion, pointing to a clear relationship between the two, and the outcome supports the idea that team alignment and collaboration play a major part in shaping managerial effectiveness. However, as seen from the comparison of H1 and H4, managerial competence emerges as a key factor influencing outcomes. In essence, the literature review supports the

conclusion that both task cohesion and managerial competence contribute to effective management, with competence playing the more dominant role in driving results within this context.

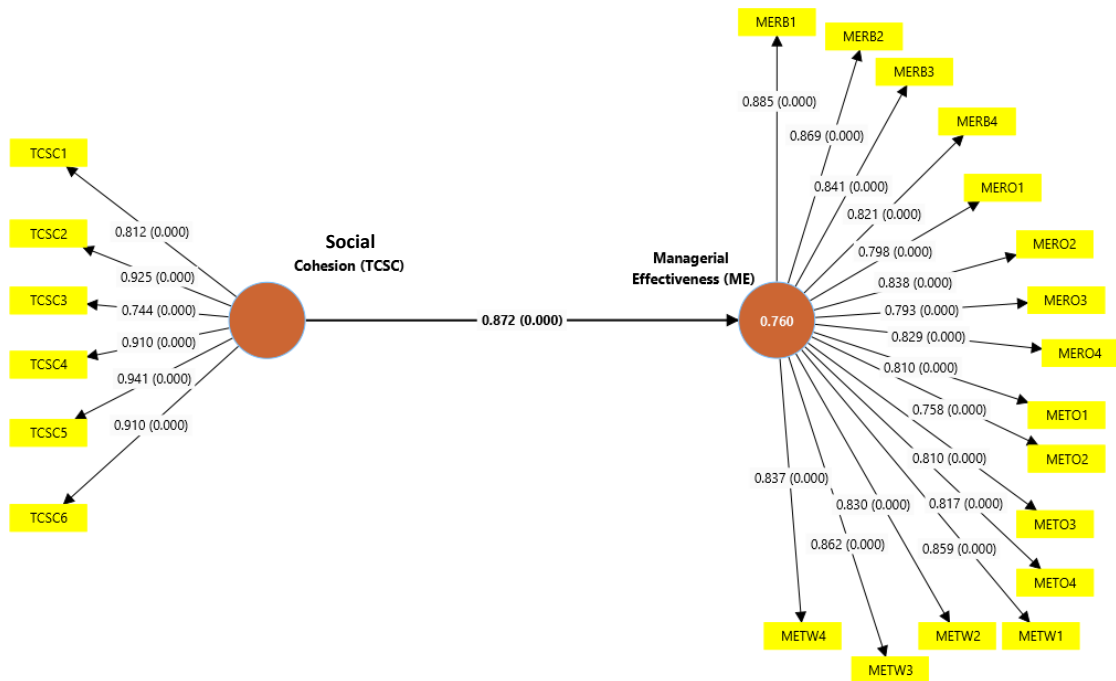
The acceptance of H4a is supported by empirical studies linking task-focused teamwork to performance outcomes. Beal et al. (2003) and Salas et al. (2015) demonstrate that task cohesion enhances productivity, coordination, and efficiency, which in turn improves managerial effectiveness. Analoui et al. (2010) emphasise that effective managers balance task execution with people management, enabling teams to achieve organisational goals. In SMEs, where lean management approaches are common (Kottika et al., 2020), task cohesion allows managers to optimise limited resources and improve operational effectiveness.

Hypothesis H5

The alternate hypothesis in H5_a was stated as follows: “*Social cohesion positively and significantly influences managerial effectiveness.*” The intention is to establish the strength and direction of the relationship between social cohesion and managerial effectiveness using the R² value. The result of the SEM simulation is presented in **Figure 4.11**, as follows.

Figure 4.11

Hypothesis 5: Relationship Between Social Cohesion and Managerial Effectiveness



In **Figure 4.11**, the path-coefficient is positive and significant at 0.872 ($p=0.000$), hence the alternate hypothesis is accepted and the null hypothesis is rejected. The coefficient of determination (R^2) is 0.760, suggesting that social cohesion influences managerial effectiveness by 76.0%. Also, this is a strong coefficient of determination, according to Cohen (1988). However, the strength of the relationship between managerial competence and managerial effectiveness in H1a is stronger than that of task cohesion by 8.7%. Implying that managerial competence is still the main determinant of managerial effectiveness.

Again, in comparison of the outcome of H5 to that in H4, the literature review offers strong backing on how social cohesion and managerial competence relate to managerial effectiveness in SMEs operating in Nigerian Oil and Gas sector. The review emphasised that socially cohesive teams are often more effective in achieving organisational goals. This aligns with the finding in H5, that social cohesion has a strong impact on managerial effectiveness. The literature consistently points to the value of strong interpersonal bonds within teams, and suggests that cohesive environments create a foundation for better decision-making,

frictionless coordination, and higher team-based trust, which are factors that naturally support effective management.

A recurring theme in the literature is that social cohesion within teams leads to stronger performance outcomes. The link between interpersonal relationships and managerial success is well-established, supporting the argument that strong social ties among team members can drive improved operational outcomes.

Furthermore, the review also highlights that while social cohesion matters, the skills and capabilities of individual managers have a deeper influence on performance. In essence, as reflected in H4, team cohesion can support managerial processes, but it is the competence of the manager that often determines whether those processes succeed. Throughout the review, empirical studies consistently show that competent managers not only improve team cohesion but also translate that cohesion into tangible results. This suggests the need for managers to reinforce team-related competencies, because strong management can improve team cohesion, and cohesive teams make it easier for managers to be effective.

Thus, from H5, the study confirms that both social cohesion and managerial competence matter in enhancing managerial effectiveness, but as in H4, places slightly greater weight on managerial competence as the key to unlocking performance. These insights offer a useful framework for SME owners/managers in the oil and gas industry to structure training, team development, and leadership strategies more effectively.

The positive relationship between social cohesion and managerial effectiveness supports the view that effective management depends on strong interpersonal relationships within teams. Social cohesion promotes trust, open communication, and cooperative problem-solving, which enhance managerial outcomes (Carmeli et al., 2015; Kloppenborg & Petrick, 1999). Although earlier studies cautioned that excessive cohesion may reduce performance focus (Al-Rawi, 2008), more recent research suggests that teams with low interpersonal

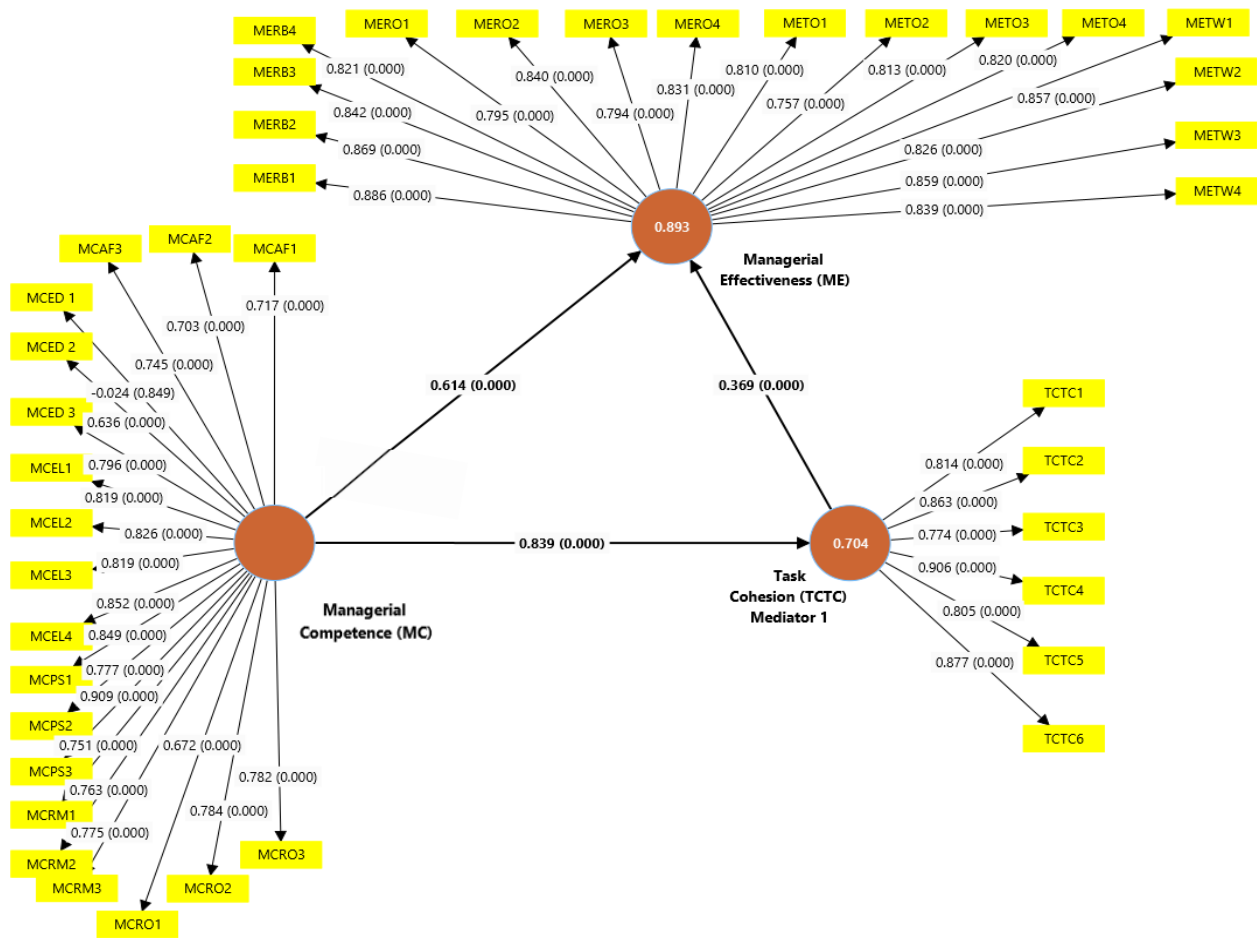
conflict and strong collaboration perform better overall (Maj, 2023). These findings reinforce the role of social cohesion in supporting managerial effectiveness.

Hypothesis H6

The need to study the mediating effect of team cohesion is expressed in hypotheses H6 (task cohesion) and H7 (social cohesion). The alternate hypothesis H6a is stated as follows: *There is a significant positive mediating influence of task cohesion on the direct relationship between managerial competence and managerial effectiveness.* A SEM representation of this H6 is presented in **Figure 4.12**.

As presented in **Figure 4.12**, the path coefficients are positive and significant as follows: MC->ME (0.614); MC->TCTC (0.839) and TCTC->ME (0.369). The indirect positive mediating effect of 0.21 is obtained from the product of the path coefficients of MC->TCTC and TCTC->ME. In comparison with H1a where the path coefficient was 0.920 without mediation, the mediating effect of task cohesion has reduced the direct influence of managerial competence on managerial effectiveness to a path coefficient of 0.614.

Figure 4.12
Hypothesis 6: Mediating Effect of Task Cohesion



The coefficient of determination (R^2) of managerial effectiveness also improved slightly from 0.847 in H1 to 0.893 in H6. Thus, task cohesion has reduced the direct effect of managerial competence on managerial effectiveness and improved the R^2 . Therefore, the alternate hypothesis H6a is accepted and the null hypothesis H60 is rejected.

The findings from H6 are grounded in concepts drawn from the literature review, particularly concerning the dynamics between managerial competence (MC), managerial effectiveness (ME), and task cohesion (TCTC) in Nigerian Oil and Gas SMEs. The connection between MC and both ME and TCTC reflects the stance earlier revealed in Chapter 2, that capable managers nurture stronger team bonds and drive performance. Managerial competence is consistently portrayed as essential for creating environments where cohesion and effectiveness can develop naturally.

The review emphasises cohesion as a performance driver, particularly in small teams. Its mediating role between competence and effectiveness supports the argument that cohesion translates managerial capability into actionable, effective outcomes. The observed reduction in the direct effect of MC on ME when TCTC is introduced suggests that cohesion reshapes the impact of managerial skills on effectiveness. This corroborates the discussions in the literature on how contextual factors like team dynamics influence the strength of direct relationship between competence and action. Including TCTC enhances the ability of the model to explain variations in ME, and reinforces the argument in favour of how team-related factors enrich the understanding of managerial impact.

Furthermore, the support for the alternative hypothesis confirms that the framework effectively captures the interactions among competence, cohesion, and effectiveness, and this aligns closely with established theories adopted in the framing of the research construct. Hence, the results agree with existing research and deepen the understanding of how managerial inputs and team cohesion interplay in shaping effectiveness within the sector.

The significant mediating role of task cohesion confirms that managerial competence enhances managerial effectiveness indirectly by improving team coordination and task execution. This finding aligns with the theory of action and job performance (Boyatzis, 2008), which emphasises the translation of competence into performance through structured actions. Task cohesion enables managers to channel their competencies into effective planning, delegation, and performance monitoring (Bakare et al., 2024). This result is also consistent with evidence that teamwork promotes work commitment and performance outcomes (Morrow, 1997).

Hypothesis H7

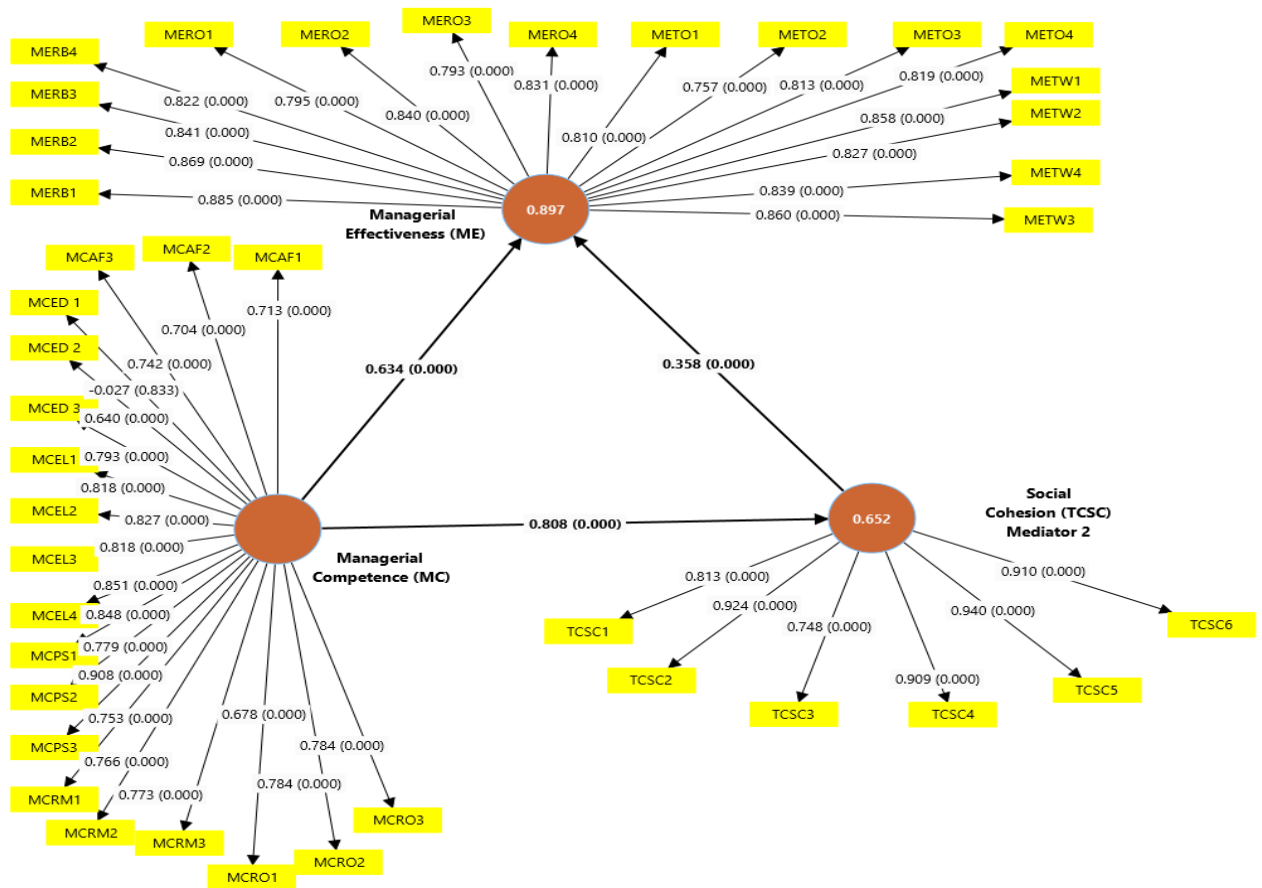
As explained in hypothesis H6 above, the alternate hypothesis H7a is stated as follows:

There is a significant positive mediating influence of social cohesion on the direct relationship

between managerial competence and managerial effectiveness.” Similarly, the SEM representation of H7 is presented in **Figure 4.13**

Figure 4.13

Hypothesis 7: Mediating Effect of Social Cohesion



As presented in **Figure 4.13**, the path coefficients are positive and significant as follows: MC->ME (0.614); MC->TCSC (0.808) and TCSC->ME (0.338). The indirect positive mediating effect of 0.19 is obtained from the product of the path coefficients of MC->TCSC and TCSC->ME. Compared with H1a where the path coefficient was 0.920 without mediation, the mediating effect of social cohesion has reduced the direct influence of managerial competence on managerial effectiveness to 0.614. Also, the coefficient of determination (R^2) of managerial effectiveness improved slightly from 0.847 in H1 to 0.897 in H7. Consequently, social cohesion has reduced the direct effect of managerial competence on managerial

effectiveness and improved the R^2 . Therefore, the alternate hypothesis H7a is accepted and the null hypothesis H67 is rejected. It is important to note from the results for H6 and H7, that the path coefficients dropped slightly in H7 and while the R^2 also increased slightly in H7. Again, the R^2 influence of managerial competence on task cohesion, it is 0.704 and on social cohesion is 0.652. Although this variation is minimal, it points to the fact that managers are more inclined towards task-driven cohesion.

Again, the study uncovers several key insights grounded in the literature review in Chapter 2, particularly regarding the interplay between managerial competence, managerial effectiveness, and team cohesion in the context of small and medium enterprises. First, the results in H7 affirm a meaningful and constructive relationship among the three constructs. Managerial competence influences both social cohesion and managerial effectiveness. This supports prior discussions that emphasises the practical importance of managerial capabilities in shaping team dynamics and overall leadership performance. The literature also underscores how competence extends beyond technical know-how, with the need to encompass interpersonal skills that naturally encourage the development of cohesive teams.

The literature review reflects that social cohesion emerges as an essential link between competence and effectiveness. Rather than simply enhancing outcomes directly, managerial competence happens to strengthen team bond, which in turn promotes better management results in SMEs. This dynamic relationship is consistent with existing research that highlights the value of cohesive teams in strengthening managerial impact, especially in high-risk business sectors like oil and gas, where operational mistakes can lead to fatal accidents.

The introduction of social cohesion as a mediator of the relationship between MC and ME, shifts the weight of influence away from a direct managerial effect, suggesting that team dynamics play an integral role in business success. This reflects a broader understanding from the literature: that within SMEs, where resources and formal structures may be limited, the

strength of interpersonal and group-level connections can be just as decisive as individual managerial skills. In essence, the findings align with and expand upon the literature by illustrating how competence and cohesion combine to drive effective management. These insights reinforce the importance of SME managers cultivating skills that encourage team-cohesive workplace to be able to navigate the complex operational environment of the oil and gas industry.

The acceptance of H7a indicates that social cohesion serves as a key mechanism through which managerial competence influences effectiveness. Drawing on self-efficacy theory (Bandura, 1997) and social comparison theory (Festinger, 1954), competent managers foster confidence, shared standards, and mutual support among employees. Social interactions and shared norms enhance group identity and collective performance (Kozlowski & Ilgen, 2006; Smith & Louis, 2009). These findings suggest that managerial competence strengthens managerial effectiveness by cultivating supportive and cohesive social environments.

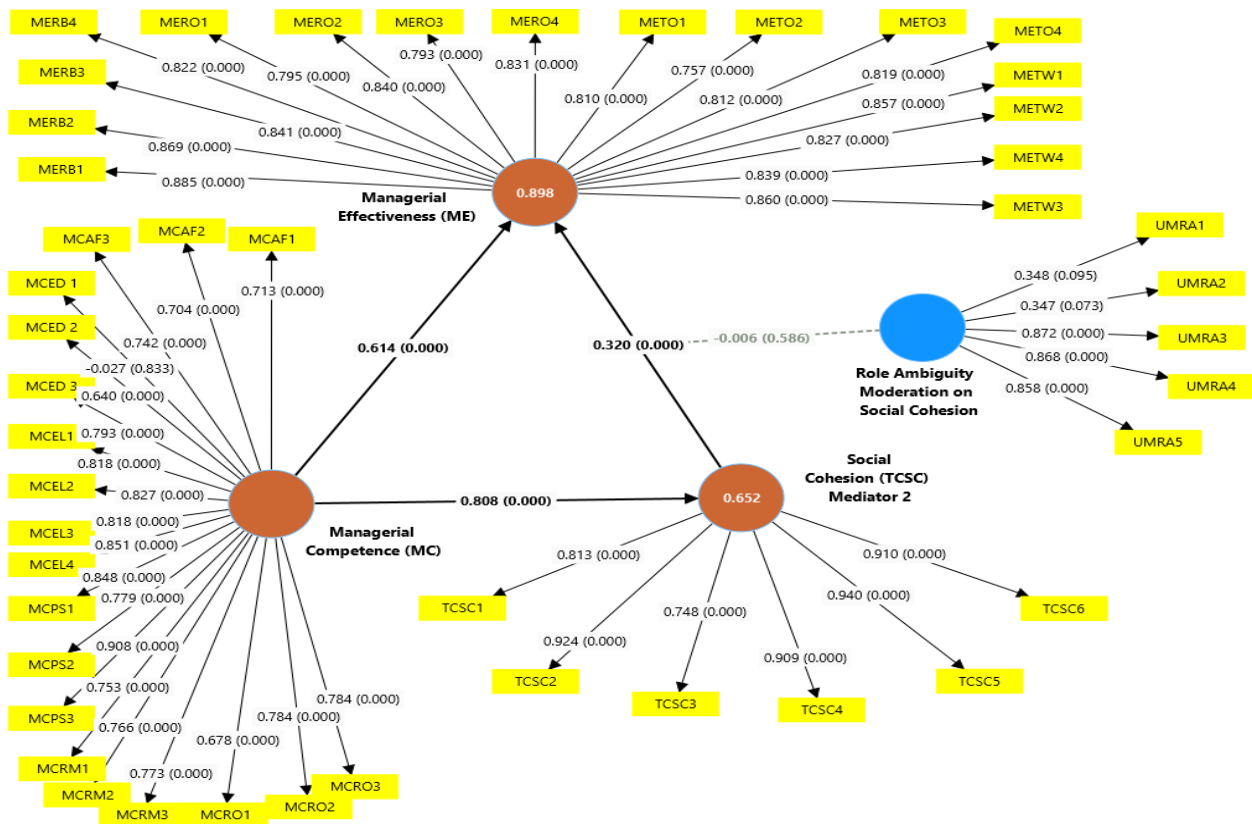
Hypothesis H8

The need to investigate the moderating effect of uncertainty management led to the formulation of Hypotheses 8, 9, 10 and 11. Consequently, the alternate hypothesis H8a is stated as follows: *There is a positive moderating effect of role ambiguity on the relationship between social cohesion and managerial effectiveness.* The SEM representation of H8 is presented in

Figure 4.14.

Figure 4.14

Hypothesis 8: Moderating Effect of Role Ambiguity on Social Cohesion

Figure 4.14*Hypothesis 8: Moderating Effect of Role Ambiguity on Social Cohesion*

As suggested in **Figure 4.14**, the path coefficient of the moderating effect of role ambiguity on social cohesion is 0.006 at a *p-value* of 0.586. Therefore, the study shows a very weak, non-significant moderation effect. This implies that the alternate hypothesis H8a is rejected while the null hypothesis is accepted. When compared with H7, discussed earlier, it was observed that there was a slight reduction of the path coefficients for the relationship between managerial competence and managerial effectiveness, and between social cohesion and managerial effectiveness. Despite the fact that the moderation effect was non-significant, role ambiguity must be prevented to enhance managerial effectiveness.

In examining the influence of role ambiguity on social cohesion, the literature review draws attention to how role ambiguity affects team dynamics and supports the findings on its moderating influence. Discussions around role ambiguity and role conflict provide context for interpreting the results, suggesting that while the moderating effect may lack statistical weight, the underlying issues remain relevant. The literature affirms that uncertainty in roles can disrupt

team cohesion and hinder managerial effectiveness, and emphasising the need for clear role definitions to support effectiveness.

Additionally, the review explains how the chosen metrics in understanding the links between managerial competence, team cohesion, and effectiveness. This framing has helped to clarify the observed outcome in the data. Even though the moderation effect was not strong, the literature reinforces the importance of addressing role ambiguity to improve team collaboration and managerial outcomes in organisational settings.

Hypothesis H9

As discussed in the evaluation of H8, the moderation effect of role ambiguity on task cohesion was considered also. The alternate hypothesis H9a is stated as follows: *There is a positive moderating effect of role ambiguity on the relationship between task cohesion and managerial effectiveness.* The SEM representation of H9 is presented in **Figure 4.15**.

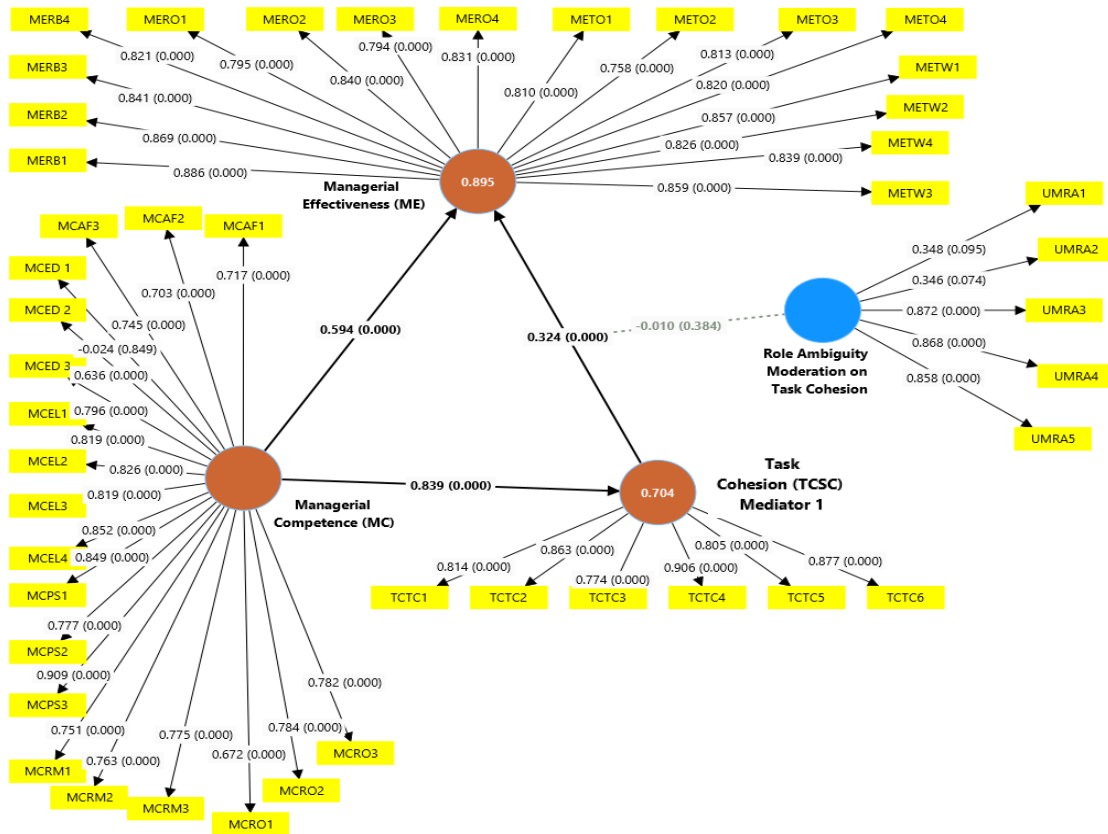
As shown in **Figure 4.15**, the path coefficient of the moderating effect of role ambiguity on task cohesion is 0.010 at a *p-value* of 0.384. Again, the study shows a very weak, non-significant moderation effect of role ambiguity on task cohesion. This indicates that the alternate hypothesis H9a is rejected while the null hypothesis is partially accepted. When compared with H6, discussed earlier, it was observed that there was a slight reduction of the path coefficients for the relationship between managerial competence and managerial effectiveness and between task cohesion and managerial effectiveness. Although the moderation effect was non-significant, role ambiguity must be prevented to improve managerial effectiveness.

Similar to H8, the literature underscores the influence of role ambiguity and conflict on the relationship between team cohesion and managerial effectiveness. Although the study in H9 found no significant moderation effect of role ambiguity on task cohesion, its relevance

should not be overlooked. Addressing ambiguity in roles remains essential for adopting effective management practices in SMEs.

Figure 4.15

Hypothesis 9: Moderating Effect of Role Ambiguity on Task Cohesion



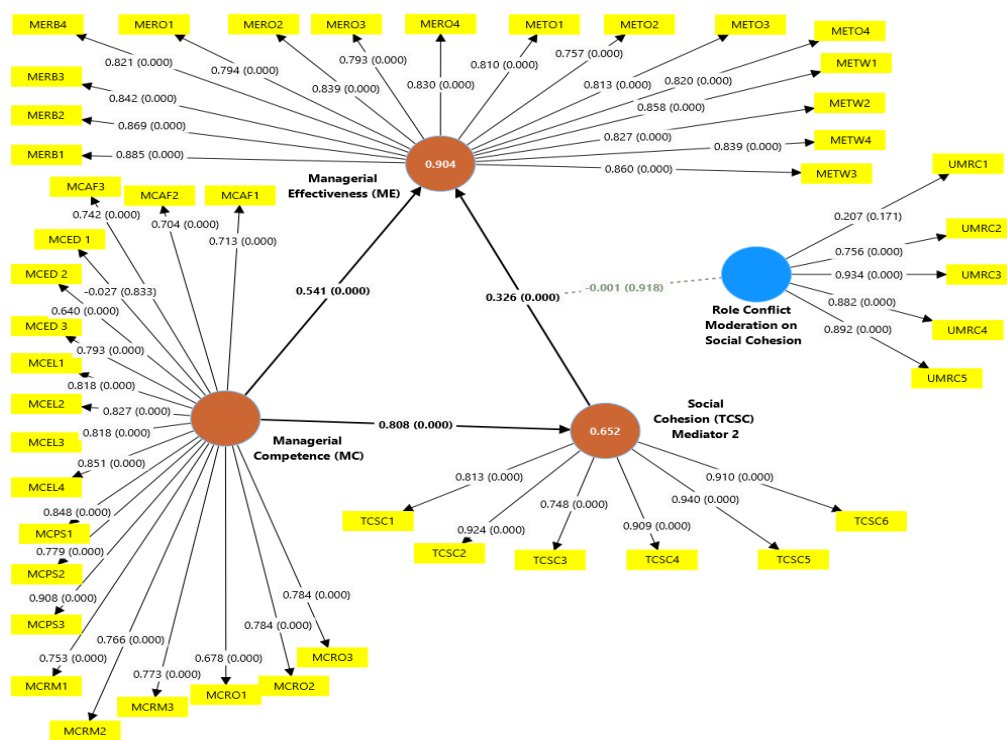
Insights from the literature also suggest that exploring different perspectives on role ambiguity has contributed to refining how managerial effectiveness is measured. This aligns with the partial support for the alternate hypothesis, which points to role ambiguity affecting the link between managerial competence and effectiveness, though not as strongly as expected, based on the peculiar dynamics in SMEs. In essence, while role ambiguity may not exert a strong moderating effect statistically, its influence remains important in shaping managerial performance and should be addressed in practice.

Hypothesis H10

In evaluating hypothesis H10, it was important to consider if role conflict can moderate social cohesion. Thus, the alternate hypothesis H10a is stated as follows: *There is a positive moderating effect of role conflict on the relationship between social cohesion and managerial effectiveness.* The SEM representation of H10 is presented in **Figure 4.16**.

Figure 4.16

Hypothesis 10: Moderating Effect of Role Conflict on Social Cohesion



In **Figure 4.16**, the path coefficient of the moderating effect of role conflict on social cohesion is 0.001 at a *p-value* of 0.918. Consequently, this is a very weak, non-significant moderation effect. This implies that the alternate hypothesis H10a is rejected while the null hypothesis is partially accepted. When compared with H7 and H8, which were discussed earlier, it was shown that role conflict had a similar effect as H8 on the path coefficients for the relationship between managerial competence and managerial effectiveness, and between social cohesion and managerial effectiveness.

Again, the literature review supports the findings on the limited moderating role of role conflict in the relationship between social cohesion and managerial effectiveness where there is inclusion and understanding. The section on managerial effectiveness highlights the specific challenges faced by SMEs, particularly regarding team cohesion which can lead to role conflict. Operational definitions for managerial competence and effectiveness further clarify how these constructs interact. The similar pattern of influence attributed to role conflict, as referenced in hypothesis H8, reflects a consistent theme with non-significant moderating effect on social cohesion. Hence, the review underscores that role conflict exerts only a marginal moderating effect when there is shared understanding, lending support to a partial acceptance of the alternative hypothesis.

Hypothesis H11

Again, as examined in H10 above, the moderation effect of role conflict on task cohesion was equally considered. The alternate hypothesis H11a is stated as follows: *There is a positive moderating effect of role conflict on the relationship between task cohesion and managerial effectiveness.* The SEM representation of H11 is presented in **Figure 4.17**.

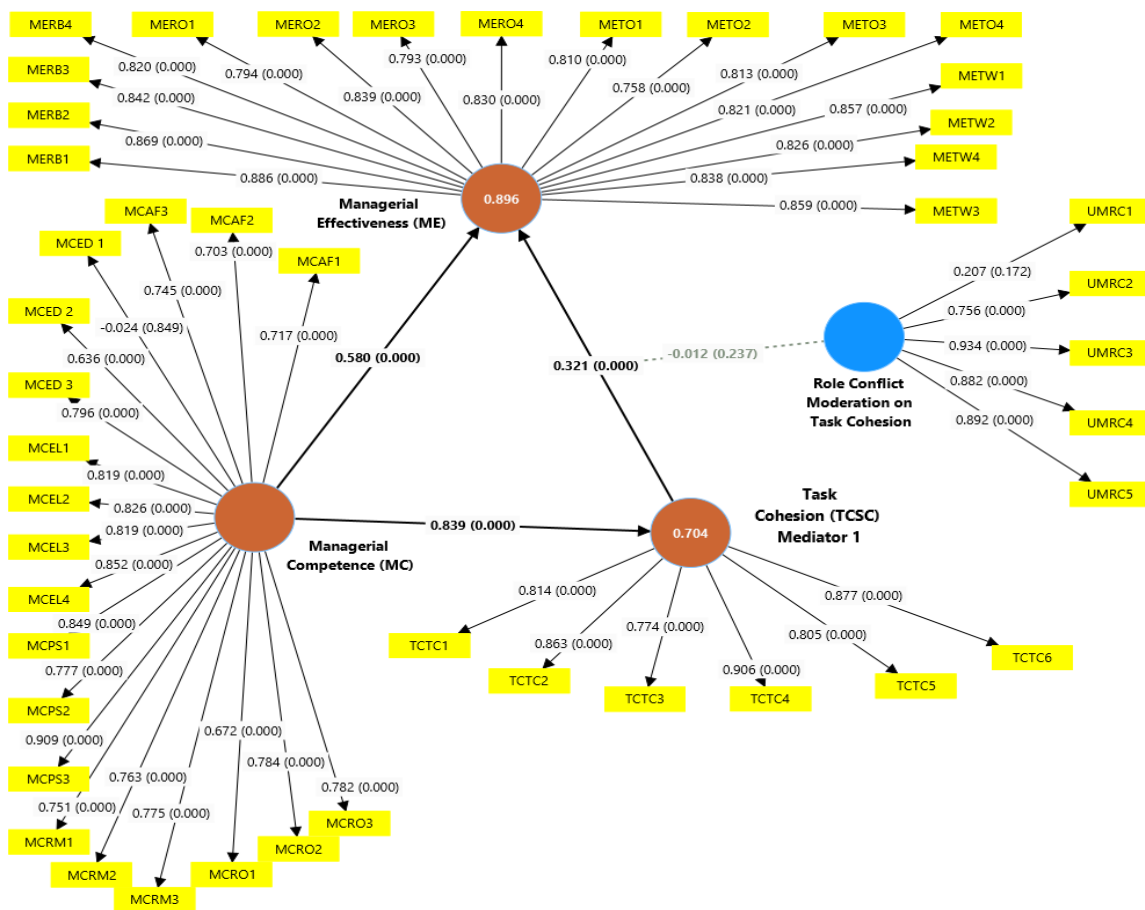
As shown in **Figure 4.17**, the path coefficient of the moderating effect of role ambiguity on task cohesion is 0.012 at a *p-value* of 0.237. Again, the study shows a very weak, non-significant moderation effect of role conflict on task cohesion. This suggests that the alternate hypothesis H11a is rejected while the null hypothesis is partially accepted. When compared with H6 and H9 discussed earlier, a similar reduction effect of the path coefficients for the relationship between managerial competence and managerial effectiveness and between task cohesion and managerial effectiveness, as seen in H9, was observed.

The study points to a negligible moderating influence of role ambiguity on task cohesion, although not a reinforcement for broader concerns about the managerial challenges faced by SMEs but role ambiguity should not be overlooked. The literature review earlier

highlights how decision-making that is grounded on role clarity and aligned with organisational intent is essential for maintaining cohesion. Ambiguity in roles disrupts this alignment, and weakens the coordination of the team. Similarly, Enshassi and Burgess (1991) underline the value of effective communication in reinforcing shared objectives, which is usually undermined when roles are not well-defined.

Figure 4.17

Hypothesis 11: Moderating Effect of Role Conflict on Task Cohesion



As seen in the review, Jones et al. (2024) further observe that SMEs, frequently operating under loose management frameworks, tend to manage progress reactively. This reactive stance can lead to both ambiguity and internal friction, which further erode cohesion. Although the outcome in H11 shows a highly structured workplace, it should be emphasised

that teamwork is hinged not just on individual capabilities, but on the structural clarity and communication practices that shape everyday operations.

The rejection of H8a–H11a is consistent with literature suggesting that role-related stressors do not always weaken performance outcomes in cohesive and experienced teams. While the lack of formal job descriptions in SMEs can create role ambiguity (Agwu & Emeti, 2014; de Kok et al., 2006), uncertainty management theory posits that employees rely on social support and shared understanding to manage ambiguity (Brashers, 2001; Wu et al., 2019). Empirical evidence indicates that role ambiguity is more strongly associated with job satisfaction than performance (Palomino & Frezatti, 2016) and that its negative effect is more pronounced for innovation than for effectiveness (Maden-Eyiusta, 2021). In team-oriented SME environments, strong cohesion may therefore buffer the impact of role ambiguity and role conflict, explaining the non-significant moderation effects observed.

Research Theoretical Model

The research theoretical model in **Figure 4.18**, emphasises the relationship between the latent variables studied, which formed the basis for the empirical investigations. As discussed earlier in chapters 2 and 3, managerial competence and effectiveness were explained from the perspective of action and job performance theory (Boyatzis, 1982, 2008) and self-efficacy theory (Bandura, 1997). These constructs encompass both behavioural actions and psychological beliefs. Action and job performance theories (Boyatzis, 1982, 2008) provide a framework for understanding the observable competencies and behaviours managers must exhibit. Meanwhile, self-efficacy theory (Bandura, 1997) explains how managers' beliefs in their capabilities influence their effectiveness. Combining these theories allows SEM to capture both the behavioural and cognitive dimensions that jointly influence managerial outcomes (Bandura, 1997; Boyatzis, 1982).

The absence of a singular theory fully accounting for team cohesion necessitates borrowing from multiple frameworks. Social comparison theory (Festinger, 1954) addresses how individuals evaluate themselves relative to others, impacting group dynamics. Cognitive theory (Bandura, 1986) offers insights into the mental processes underlying team interactions. Social identity theory and self-categorisation theory (Tajfel, 1978; Tajfel & Turner, 1979) explain how individuals' identification with groups influences cohesion. Together, these theories provide a robust foundation to model the psychological and social processes underpinning team cohesion (Haslam et al., 2011; Turner et al., 1987).

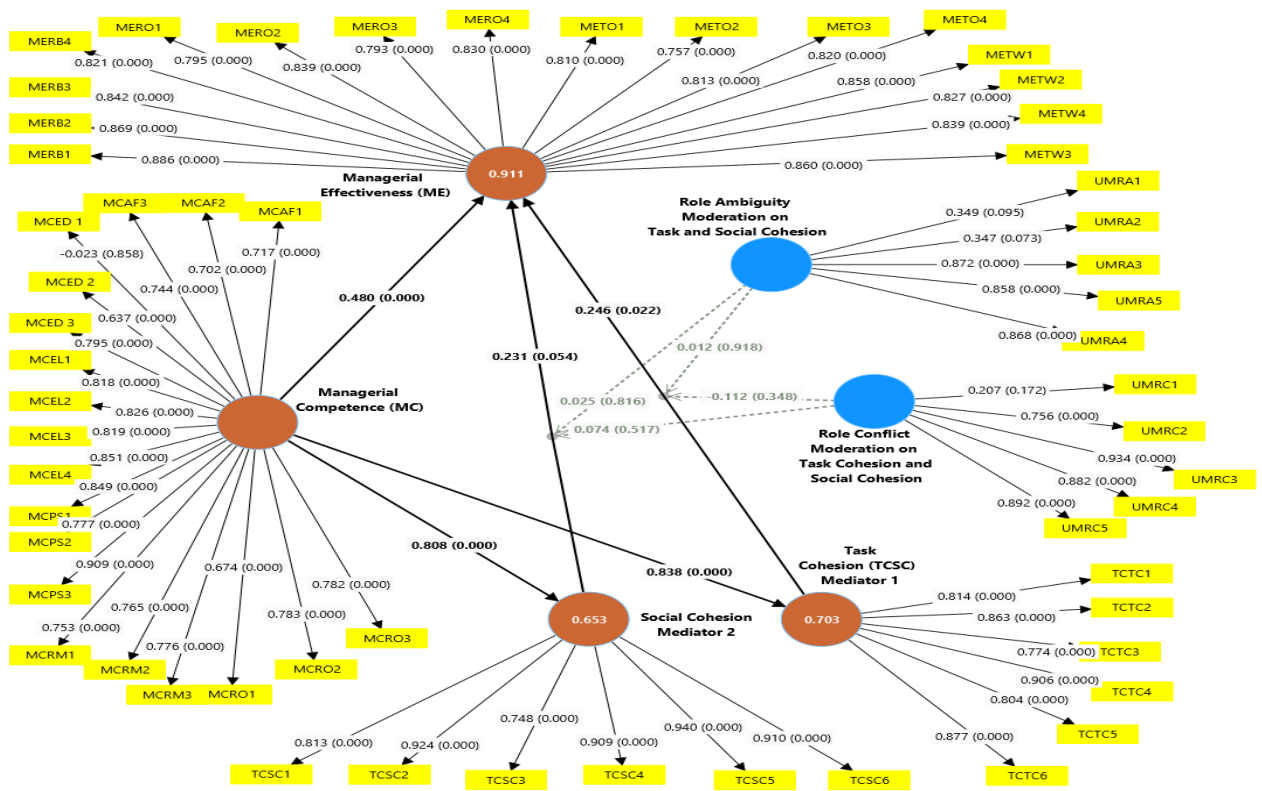
Role ambiguity and role conflict were investigated using role theory (Rizzo et al., 1970). Role theory (Rizzo et al., 1970) specifically addresses the expectations, uncertainties, and tensions associated with organisational roles. Including role theory in SEM captures how ambiguity and conflict arise from role expectations and impact individual and team outcomes (Kahn et al., 1964; Rizzo et al., 1970).

The outcome of each hypothesis as determined by the complex interaction between the concepts in **Figure 4.18**, is presented in **Table 4.5**. Under the complex theoretical interactions simulated in **Figure 4.18**, the measured variables are ranked as reflective factors of each concept. The moderating effect of role ambiguity and role conflict have been ignored in further because the path coefficients are very weak and non-significant, as discussed earlier in H8, 9, 10 and 11.

Figure 4.18

Research Theoretical Model

Figure 4.18
Research Theoretical Model



Based on the hypotheses testing exercise conducted earlier, the research theoretical model was simulated using SmartPLS software for SEM. Structural Equation Modeling (SEM) is a powerful multivariate technique that allows for the simultaneous testing of complex relationships among latent constructs. The use of multiple theoretical perspectives in SEM is often necessary when investigating multifaceted phenomena that cannot be fully explained by a single theory. This approach enhances the explanatory power, validity, and comprehensiveness of the model (Bollen, 1989; Kline, 2011). Using multiple theories enables a richer conceptualisation of constructs and pathways, which aligns with the principles of theory integration in organisational research (Kline, 2011).

Moreover, the flexibility of SEM supports the testing of this nature of integrated models, and allow researchers to evaluate direct, indirect, and mediated effects across different theoretical domains (Hair et al., 2021). This will lead to a more holistic understanding of complex organisational phenomena and strengthens the construct validity of the model.

In the context of managerial competence and effectiveness, and related constructs such as team cohesion, role ambiguity, and role conflict, adopted in this study, the integration of diverse theories is essential due to the multidimensional nature of these concepts.

The findings of the study are well-supported by a carefully curated mix of theoretical perspectives that deepen our understanding of key organisational behaviours. Central to this framework is the connection between managerial competence and team performance, which is anchored in Boyatzis's action and job performance theory. This model enables a nuanced view of how specific competencies translate into effective leadership and influence team outcomes. By focusing on behavioural indicators, it offers a practical yet theory-driven approach to assessing managerial effectiveness within diverse organisational settings.

Team cohesion, while lacking a single, direct theoretical foundation, is insightfully examined through the lenses of social comparison, self-categorisation, social cognitive and social identity theories. These theories collectively explain how individuals align themselves with group norms and derive a sense of identity from their affiliations. This social positioning fosters a shared purpose and increases solidarity among team members, reinforcing the importance of peer-related evaluations in cultivating cohesive work environments.

The inclusion of role theory to interpret the impacts of role ambiguity and conflict adds another layer of depth. The conceptualisation in the literature (Rizzo et al., 1970), sheds light on how unclear or conflicting expectations can disrupt workflow and interpersonal dynamics. Interestingly, despite being integrated into the structural model, the minimal impact of role ambiguity and conflict on the link between team cohesion and managerial effectiveness, as revealed by the weak path coefficients, signals their limited moderating capacity in this context. This outcome not only challenges assumptions about the disruptive potential of these factors but also invites further exploration into situational or contextual moderators to mitigate their effects.

Altogether, the integration of these theories forms a coherent and multifaceted analytical base for the study. The use of SmartPLS software to model these interactions through SEM further enhances the credibility of the findings, allowing for a precise examination of both direct and indirect relationships among variables. This strategic alignment of theory and method not only validates the outcomes but also underscores the complexities present in managerial roles and team dynamics within organisational structures. This was evaluated further in the next section.

Table 4.5

Hypothesis Outcome from Complex Research Model

Relationship	Path-Coefficient	P-value	Before	After	Decision
(Direct Effect)					
H1a:MC->ME	0.48	0.00	Positive & significant	Positive & significant	Accept H1a; Reject H1 ₀
H2a:MC->TCTC	0.81	0.00	Positive & significant	Positive & significant	Accept H2a; Reject H2 ₀
H3a:MC->TCSC	0.84	0.00	Positive & significant	Positive & significant	Accept H3a; Reject H3 ₀
H4a: TCTC->ME	0.25	0.02	Positive & significant	Positive & significant	Accept H4a; Reject H4 ₀
H5a: TCSC->ME	0.23	0.05	Positive & significant	Positive & significant	Accept H5a; Reject H5 ₀
Mediation (Indirect Effect)					
H6a: MC->TCTC->ME	0.21	0.03	Positive & significant	Positive & significant	Accept H6a; Reject H6 ₀
H7a: MC-> TCSC->ME	0.19	0.05	Positive & significant	Positive & significant	Accept H6a; Reject H6 ₀
Moderation Effect					
H8a: RA on TCSC->ME	0.03	0.82	Positive & significant	Positive & non-significant	Reject H8a; Accept H8 ₀
H9a: RA on TCTC->ME	0.01	0.92	Positive & significant	Positive & non-significant	Reject H9a; Accept H9 ₀
H10a: RC on TCSC->ME	0.07	0.52	Positive & significant	Positive & non-significant	Reject H10a; Accept H10 ₀
H11a: RC on TCTC->ME	-0.11	0.35	Positive & significant	Negative & non-significant	Reject H11a; Accept H11 ₀

Overall, the findings of this study are largely consistent with and anticipated by existing literature, particularly with respect to the central role of managerial competence in shaping managerial effectiveness and team cohesion within SMEs. Prior studies have consistently emphasised that managerial competence enables managers to translate knowledge and skills into purposeful action, which enhances effectiveness and organisational performance (Boyatzis, 1982, 2008; Analoui et al., 2010; Diskiene et al., 2018). The strong direct effects observed between managerial competence and managerial effectiveness, task cohesion, and social cohesion therefore align with established theoretical and empirical evidence, reinforcing the expectation that competent managers foster productive work environments and effective teams.

Similarly, the positive effects of both task cohesion and social cohesion on managerial effectiveness were expected. The literature has long established that cohesive teams—particularly those with high task coordination and shared goals—enhance productivity, communication, and managerial outcomes (Beal et al., 2003; Salas et al., 2015). The findings confirm that in SME contexts, where operations are lean and labour-intensive, cohesion serves as a critical mechanism through which managerial effectiveness is realised.

The mediating roles of task cohesion and social cohesion were also consistent with expectations derived from teamwork and performance theories. The results support the view that managerial competence does not influence effectiveness in isolation but operates through social and task-based processes within teams. This finding is theoretically grounded in the theory of action and job performance (Boyatzis, 2008) and is reinforced by social and behavioural theories, including self-efficacy (Bandura, 1997) and social comparison theory

(Festinger, 1954). By empirically confirming these mediating pathways in an SME setting within the Nigerian oil and gas sector, the study extends existing knowledge to a context that remains underrepresented in the literature.

However, the non-significant moderating effects of role ambiguity and role conflict were less expected, given prior research linking these constructs to reduced job satisfaction, innovation, and performance (Maden-Eyiusta, 2021; Palomino & Frezatti, 2016). A plausible explanation for this finding lies in the contextual characteristics of SMEs and the study sample. SMEs often operate with informal structures and flexible role boundaries (Agwu & Emeti, 2014), which may normalise role overlap and reduce the disruptive effects of ambiguity and conflict. Additionally, strong task and social cohesion may act as buffering mechanisms, enabling employees to rely on shared understanding, communication, and mutual support to manage uncertainty (Brashers, 2001; Wu et al., 2019). This suggests that in cohesive and experienced teams, role ambiguity and role conflict may have a diminished impact on managerial effectiveness, particularly when managers encourage innovation and participatory decision-making.

From a practical standpoint, the findings offer clear and actionable implications for SME owners, managers, policymakers, and professional practitioners, which is central to the applied nature of this doctoral study. First, the results underscore the need for targeted managerial development programmes that prioritise leadership, people management, decision-making, and strategic planning competencies. Investment in managerial competence is likely to yield significant returns through improved team cohesion and managerial effectiveness, ultimately enhancing SME sustainability.

Second, the findings highlight the importance of deliberately fostering task and social cohesion as managerial strategies rather than relying solely on structural controls or formalised roles. SME managers should focus on clear goal communication, collaborative work practices,

inclusive leadership, and supportive social interactions to optimise team performance. This has direct implications for training, mentoring, and performance management systems within SMEs.

Third, the limited moderating influence of role ambiguity and role conflict suggests that SMEs may benefit more from strengthening leadership capability and team cohesion than from attempting to overly formalise job roles. This insight is particularly valuable in resource-constrained environments, where excessive formalisation may be impractical.

In terms of scholarly contribution, this study builds on and extends the existing literature by empirically integrating managerial competence, managerial effectiveness, task cohesion, and social cohesion within a single explanatory model. While prior studies have examined these constructs in isolation, this research advances understanding by demonstrating their interconnected roles and testing both mediation and moderation mechanisms within an SME context.

Moreover, by focusing on SMEs in the Nigerian oil and gas sector, the study contributes contextual evidence from a developing economy and a strategically important industry, addressing a notable gap in the literature. The findings provide empirical support for emerging calls to develop SME-specific management theories that emphasise competence, teamwork, and adaptability rather than large-firm bureaucratic models (Rodrigues et al., 2021; Dabić & Kraus, 2023).

Thus, the study confirms expected theoretical relationships, explains unexpected findings through contextual and behavioural lenses, offers practical guidance for SME management, and meaningfully contributes to both theory and practice in the field of managerial competence and SME performance.

Evaluation of Findings

This section presents detailed evaluations of the findings in **Figure 4.18** and **Table 4.5**. The purpose of this section is to enhance understanding by interpreting data to provide answers to the research questions. The results of the SEM analysis offer convincing evidence of the relationships between the four concepts, although the moderating influence of uncertainty management was not significantly supported, and not included in this detailed evaluation. These concepts were defined based on the ranking of their measured dimensions. For each research question, understanding of the investigated concepts was further enhanced by examining the correlational strengths presented in **Table 4.4**. The explanations provided are based on the operationalised survey questions corresponding to the variable of interest. The emphasised dimensions of the concepts are provided in **Table 4.6**, **Table 4.8** and **Table 4.10**. In the discussion that follows, each concept was evaluated based on the ranked dimensions of the measured factors, followed by an interpretation of the research questions through the lens of these concepts.

Ranked Dimensions of Managerial Competence

The ranked outcome of the simulated SEM for the measured dimensions of managerial competence (MC) is presented in **Table 4.6**. The explanation provided for MC is based on the coding for each question in the survey tool under each dimension. As shown in **Table 4.6**, the first question, MCPS3, demonstrates a strong loading of 0.909 ($p = 0.000$), indicating the significant association of MC with the problem-solving dimension. This result emphasises the importance of a manager's openness to exploring new ideas and solutions for addressing operational challenges. This is followed by the dimension of effective leadership (MCEL4), which exhibits a strong outer loading of 0.851 ($p = 0.000$). This finding highlights a leadership approach characterised by a manager's openness to feedback and suggestions from employees.

Table 4.6*Ranked Measured Variables of Managerial Competencies Dimensions*

S/N	Measured Variables of Managerial Competences	Domain	Outer Loadings	P values	Ranking
1	MCPS3 <- Managerial _Competence (MC)	Problem Solving	0.909	0.000	↓ Decreasing
2	MCEL4 <- Managerial _Competence (MC)	Effective Leadership	0.851	0.000	
3	MCPS1 <- Managerial _Competence (MC)	Problem Solving	0.849	0.000	
4	MCEL2 <- Managerial _Competence (MC)	Effective Leadership	0.826	0.000	
5	MCEL3 <- Managerial _Competence (MC)	Effective Leadership	0.819	0.000	
6	MCEL1 <- Managerial _Competence (MC)	Effective Leadership	0.818	0.000	
7	MCED 3 <- Managerial _Competence (MC)	Efficient Decision Making	0.795	0.000	
8	MCRO2 <- Managerial _Competence (MC)	Resource Optimization	0.783	0.000	
9	MCRO3 <- Managerial _Competence (MC)	Resource Optimization	0.782	0.000	
10	MCPS2 <- Managerial _Competence (MC)	Problem Solving	0.777	0.000	
11	MCRM3 <- Managerial _Competence (MC)	Relationship Management	0.776	0.000	
12	MCRM2 <- Managerial _Competence (MC)	Relationship Management	0.765	0.000	
13	MCRM1 <- Managerial _Competence (MC)	Relationship Management	0.753	0.000	
14	MCAF3 <- Managerial _Competence (MC)	Adaptability and Flexibility	0.744	0.000	
15	MCAF1 <- Managerial _Competence (MC)	Adaptability and Flexibility	0.717	0.000	
16	MCAF2 <- Managerial _Competence (MC)	Adaptability and Flexibility	0.702	0.000	
17	MCRO1 <- Managerial _Competence (MC)	Resource Optimization	0.674	0.000	
18	MCED 2 <- Managerial _Competence (MC)	Efficient Decision Making	0.637	0.000	
19	MCED 1 <- Managerial _Competence (MC)	Efficient Decision Making	-0.023	0.858	

The third high-ranking survey question, MCPS1, with a strong loading of 0.849 ($p=0.000$), also relates to problem-solving and emphasises an SME environment where the manager encourages employees to contribute their ideas and suggestions for resolving challenges. The next three strong loading survey questions with $p=0.000$ in the order (MCEL2: 0.826→MCEL3: 0.819→MCEL1: 0.818), are related to effective leadership. This suggests a managerial leadership approach in SMEs where the manager effectively manages and harnesses employees' talents within the organisation. Employees are confident handling novel challenges and job responsibilities, while the leadership actively promotes innovative work culture. The seventh high-loading survey question (MCED 3) of 0.795 ($p = 0.000$), highlights a central aspect of effective decision-making in SMEs, where employees are confident and comfortable in approaching managers directly for discussions and decision-making.

The seventh and eighth high-ranking survey questions (MCRO2: 0.783, MCRO3: 0.782) at $p = 0.000$ pertain to resource optimisation. They emphasise the importance of managerial support in two key areas: first, the manager's role in identifying, assessing and

optimising diverse skills and talents within the workforce through performance discussions, and second, the provision of necessary technology and training by the management team to enhance productivity and competitiveness.

The tenth survey question (MCPS2: 0.777, $p = 0.000$) focuses on problem-solving, emphasising the need for managers of SMEs to implement innovative ideas suggested by employees to address challenges or enhance work-related processes. Furthermore, the eleventh (MCRM3: 0.776), twelfth (MCRM2: 0.765), and thirteenth (MCRM1: 0.753) survey questions, which rank high in significant loadings ($p = 0.000$), highlight the critical role of relationship management. These findings underscore the importance of the manager's role in effective relationship management in consistently identifying and addressing conflicts between the management and stakeholders.

The adaptability and flexibility dimension of managerial competence (MC) is reflected in the fourteenth (MCAF3: 0.744), fifteenth (MCAF1: 0.717), and sixteenth (MCAF2: 0.702) ranked survey questions, all showing significant loadings ($p = 0.000$). These findings emphasise the importance for SME managers to develop competencies that promote adaptability among employees. Specifically, this includes assisting employees to feel confident in facing unexpected challenges or changes in job responsibilities, promoting acceptance and flexibility when collaborating with others, and ensuring they receive adequate training and resources to meet the changing business environment.

The seventeenth (MCRO 1: 0.674, $p = 0.000$) and eighteenth (MCED 2: 0.637, $p = 0.000$) survey questions, with significant high loadings, address resource optimisation and efficient decision-making, respectively. MCRO 1 highlights the importance of encouraging employees to take on diverse roles, while MCED 2 emphasises the need for SME managers to empower employees by involving them in decision-making processes. The final survey question (MCED 1: -0.023, $p = 0.858$), which pertains to efficient decision-making, showed

no significant outer loading at $p < 0.05$ on MC. MCED 1 suggests that routine tasks and decisions require approval from the SME manager/owner as opined in the literature (Agwu & Emeti, 2014), which was contradicted by the study. This indicates that the workforce is experienced enough to handle such tasks independently without constant managerial oversight.

Consequently, the evaluation of the ranked dimensions of managerial competence highlights key competencies for SME managers as stated in **Table 4.7** as follows: (1) *Problem-solving*: Encouraging creativity, collaboration, and the implementation of innovative solutions; (2) *Effective leadership*: Furthering a positive work environment, empowering employees, and promoting innovation; (3) *Efficient decision-making*: Making timely and informed decisions, considering various perspectives, and taking calculated risks; (4) *Resource optimisation*: Maximising the utilisation of resources, including human capital, technology, and financial assets; (5) *Relationship management*: Building strong relationships with employees and stakeholders, resolving conflicts, and cultivating a harmonious work environment; and (6) *Adaptability and flexibility*: Embracing change, promoting a culture of continuous learning, and equipping employees to adapt to evolving business conditions.

Table 4.7

Ranked Dimensions of Managerial Competencies

Ranking Order	Ranked Dimensions of Managerial Competence	Description
1	Problem-Solving	Encouraging creativity, collaboration, and the implementation of innovative solutions.
2	Effective Leadership	Furthering a positive work environment, empowering employees, and promoting innovation.
3	Efficient Decision-Making	Making timely and informed decisions, considering various perspectives, and taking calculated risks.
4	Resource Optimization	Maximizing the utilization of resources, including human capital, technology, and financial assets.
5	Relationship Management	Building strong relationships with employees and stakeholders, resolving conflicts, and cultivating a harmonious work environment
6	Adaptability and Flexibility	Embracing change, promoting a culture of continuous learning, and equipping employees to adapt to evolving business conditions.

The ranking in **Table 4.7** highlights the vital importance of an SME manager/owner possessing the right competencies. In discussing how SMEs in Greece survived the economic crisis after about 229,000 SMEs ceased business operations between 2008 and 2014, Kottika et al. (2020) noted that SME entrepreneurs who are equipped with the appropriate blend of traits, skills, strategic foresight, and adaptive tactics are better positioned to navigate financial crises that may seem overwhelming, significantly enhancing their chances of survival and long-term growth and sustainability.

In the current study, the two key dimensions driving managerial competence, with outer loadings greater than 0.8 ($p < 0.05$), are problem-solving and effective leadership. As seen in **Table 4.7**, a manager must encourage creativity within the team. This is corroborated Ndlela and Barnes (2024), whose study suggests that creative thinking enhances problem-solving competency in SMEs. However, the need for the adoption of innovative solutions in problem-solving, as demonstrated in this study has been avoided by most SMEs because of the claim that newer innovations are complex to deploy (Low et al., 2016). Hence, SMEs must invest in newer technologies and continuous training of their employees to sustain business growth.

Effective leadership is also ranked as the second most important competency of an SME manager/owner. Here, leadership is linked to the creation of a positive workplace where employees are empowered and innovation is promoted. Thus, demonstrating a people-oriented leadership approach. Similarly, Sangka et al. (2019) suggest that leadership is the highest-ranking competence needed by an SME manager. To enhance people-oriented leadership in SMEs, Kalshoven et al. (2011) suggest that an ethical leadership approach positively influences a leader's effectiveness. This form of leadership supports teamwork instead of being self-pleasure-seeking (Northouse, 2019) and improving work motivation (Ouakouak et al., 2020). A further advantage of adopting ethical leadership in managing SMEs is that it encourages employees' acceptance of change (Metwally et al., 2019). Therefore, the finding of this study

is in line with the adoption of ethical leadership to enhance effective leadership for SME survival.

The third-ranking dimension in **Table 4.7** is efficient decision-making through the participation of employees. This corroborates the study by (Guo & Wang, 2017), where the authors suggest that provided employees have a sense of psychological safety, participatory decision-making can enhance creativity. As stated elsewhere (Chen et al., 2007), participatory decision-making allows team members to share valuable ideas and incorporate diverse perspectives. Thus, suggesting the importance of participatory leadership approach in SMEs to enhance efficient decision-making.

Resource optimisation comes next as an important competence needed by an SME manager/owner. Research outcome suggests that cost reduction was the highest-ranking tactic that led to the later survival of SMEs in Greece (Kottika et al., 2020). Like in Greece, Nigerian SMEs are heavily influenced by economic instability, infrastructural deficiencies, and limited financial access (Etuk et al., 2024; Osotimehin et al., 2012; PwC Nigeria, 2024). These factors make cost reduction a critical survival and growth tactic, mirroring the findings from the Greece. The perspective adopted in this study is linking managerial competence to team performance through cohesion. Hence, from a labour optimisation point of view, (Liang et al., 2021) suggest that the optimal allocation of labour resources should be balanced with work demand. Again, to enhance a corporate culture, which is lacking in most SMEs staff retention can be encouraged through a human resource strategy plan (Yongcai, 2010). This underscores the critical need for SME managers to develop strong resource optimisation competence as noted in this study.

Relationship management ranked fifth as the competence needed by SME managers/owners to improve conflict resolution in the workplace. The importance of non-financial motivational tools was emphasised in the literature (Kmecová, 2021), where the

relationship between the manager and employees can aid in providing motivational incentives to high-performing staff. Relationship management can be enhanced in SMEs if the owners can set up a “common prospect together” with employees and reach an agreement on the expected core values and norms that will sustain the relationship (Yongcai, 2010).

Finally, adaptability and flexibility ranked as the sixth competence of an SME manager/owner, emphasising the importance of embracing change, promoting a culture of continuous learning, and equipping employees to adapt to the evolving business landscape. (Purnama, 2024) suggests that innovative behaviour can be encouraged by creating a culture of flexibility; therefore, adaptability to business environmental changes should be prioritised.

In summary, the study highlights the critical competencies for SME managers/owners, emphasising problem-solving and effective leadership as key to navigating financial crises and promoting team cohesion. Effective leadership promotes innovation and ethical practices, enhancing motivation and change acceptance. Participatory decision-making improves creativity by involving employees, while resource optimisation ensures cost-effective operations. Relationship management aids conflict resolution and employee motivation. Lastly, adaptability and flexibility are essential for embracing change and continuous learning, ensuring SMEs remain resilient in dynamic business environments.

Whereas the effectiveness and capabilities of SME owners are weak due to the lack of appropriate competence training (Atiase et al., 2023), this study provides a means to prioritise the necessary competency training to enhance team cohesion and managerial effectiveness.


Ranked Dimensions of Managerial Effectiveness

For managerial effectiveness (ME), the ranked outcome of the simulated SEM in **Figure 4.18** for the measured dimensions is presented in **Table 4.8**. The explanation provided for ME is based on the coding for each question in the survey tool under each dimension. As

seen in **Table 4.8**, the outer loadings of all measured variables are >0.7 , suggesting a strong effect.

Table 4.8

Ranked Measured Variables of Managerial Effectiveness Dimensions

S/N	Measured Variables of Managerial Effectiveness	Domain	Outer Loadings	P values	Ranking
1	MERB1 <- Managerial_Effectiveness (ME)	Relationship Building	0.886	0.000	
2	MERB2 <- Managerial_Effectiveness (ME)	Relationship Building	0.869	0.000	
3	METW3 <- Managerial_Effectiveness (ME)	Teamwork	0.860	0.000	
4	METW1 <- Managerial_Effectiveness (ME)	Teamwork	0.858	0.000	
5	MERB3 <- Managerial_Effectiveness (ME)	Relationship Building	0.842	0.000	
6	MERO2 <- Managerial_Effectiveness (ME)	Result-Oriented	0.839	0.000	
7	METW4 <- Managerial_Effectiveness (ME)	Teamwork	0.838	0.000	
8	MERO4 <- Managerial_Effectiveness (ME)	Result-Oriented	0.830	0.000	
9	METW2 <- Managerial_Effectiveness (ME)	Teamwork	0.827	0.000	
10	MERB4 <- Managerial_Effectiveness (ME)	Relationship Building	0.821	0.000	
11	METO4 <- Managerial_Effectiveness (ME)	Efficient Task Organizxation	0.820	0.000	
12	METO3 <- Managerial_Effectiveness (ME)	Efficient Task Organizxation	0.813	0.000	
13	METO1 <- Managerial_Effectiveness (ME)	Efficient Task Organizxation	0.810	0.000	
14	MERO1 <- Managerial_Effectiveness (ME)	Result-Oriented	0.795	0.000	
15	MERO3 <- Managerial_Effectiveness (ME)	Result-Oriented	0.793	0.000	
16	METO2 <- Managerial_Effectiveness (ME)	Efficient Task Organizxation	0.757	0.000	

The first (MERB1: 0.886) and second (MERB2:0.869) significant high-ranking survey questions at $p=0.000$ are related to relationship building. While MERB1 suggests a manager who effectively resolves conflicts within the team, MERB2 indicates that a manager's effectiveness is determined by the ability to actively listen to team members and colleagues when addressing issues or concerns. Also, the third (METW3: 0.860) and fourth (METW1: 0.858) high-ranking significant loading at $p=0.000$ are related to teamwork. METW3 emphasises that managers should provide clear guidance and direction to help the team achieve its goals, while METW1 suggests that manager effectively leads by example to promote teamwork in the workplace. On the sixth (MERO2: 0.839), seventh (METW4: 0.838), eight (MERO4: 0.830) and ninth (METW2: 0.827) rows are ranked significant survey questions at $p=0.000$ and are related to result-oriented (MERO2, MERO4) and teamwork (METW2, METW4) dimensions of ME. These questions expresses managerial effectiveness in SMEs when the manager: (1) effectively tracks progress toward goals and adjusts strategies when

necessary; (2) demonstrates shared leadership behaviour in promoting teamwork; (3) positively driving results by communicating goals, expectations, and progress to the team; and (4) inspires and motivates employees to work collaboratively as a team.

Furthermore, the outer loading on the tenth ranked row is MERB4 (0.821, $p=0.000$) which measures relationship building. Thus, assessing a manager's effectiveness through the promotion and facilitation of collaboration among team members, to improve employee's productivity. The outer loadings from the eleventh to the thirteenth rows are MET04 (0.820, $p=0.000$), MET03 (0.813, $p=0.000$) and MET01 (0.810, $p=0.000$) and they measured effective task organisation. Specifically, these measured variables express managerial effectiveness through an SME manager's experience and knowledge in the adoption of project management methodologies and tools, efficient resource allocation, and task prioritisation.

Again, the outer loadings from ranked fourteenth and fifteenth row are MERO1 (0.795, $p=0.000$) and MERO3 (0.793, $p=0.000$), and measured result-oriented dimension of ME. MERO1 suggest that the manager sets clear and achievable goals and objectives for each team, and MERO3 indicates timely. Achievement of expected goals. Finally, on the sixteenth ranked row is METO2 (0.757, $p=0.000$), which measures efficient task organisation, and relates to the ability of the manager to effectively delegate tasks to appropriate team members based on their strengths and abilities. Suggesting the need for an SME manager to be meticulous.

Table 4.9
Ranked Dimensions of Managerial Effectiveness

Ranking Order	Ranked Dimensions of Managerial Effectiveness	Description
1	Relationship Building	Managers who effectively resolve conflicts and actively listen to their team members are highly valued, demonstrating empathy and understanding in interactions with employees is vital for building strong relationships, and promotes collaboration and facilitates teamwork among team members to improve productivity and job satisfaction significantly
2	Teamwork	The manager's ability to provide clear guidance and direction to help team members understand their roles and responsibilities, leading by example and demonstrating teamwork behaviours to inspire and motivate employees to work collaboratively
3	Result-Oriented	The manager's ability to set clear goals, track progress, and adjust strategies for achieving desired outcomes, encouraging shared leadership and empowering team members to enhance motivation and engagement, and effective communication of goals, expectations, and progress, as well as inspiring and motivating employees, is key to driving results.
4	Effective Task Organization	Experience and knowledge in project management methodologies and tools are valuable for efficient task organization, effective allocation of resources and prioritization of tasks to optimize productivity, and the ability to delegate tasks appropriately can free up time for strategic thinking and problem-solving

Consequently, the results of the survey have revealed four key dimensions of managerial effectiveness (ME) in SMEs, as suggested by the high-ranking significant loadings for the survey questions as follows in descending ranked order as shown in **Table 4.9**: (1) *Relationship building*: Managers who effectively resolve conflicts and actively listen to their team members are highly valued, demonstrating empathy and understanding in interactions with employees is vital for building strong relationships, and promotes collaboration and facilitates teamwork among team members to improve productivity and job satisfaction significantly. (2) *Teamwork*: The manager's ability to provide clear guidance and direction to help team members understand their roles and responsibilities, leading by example and demonstrating teamwork behaviours to inspire and motivate employees to work collaboratively. (3) *Result-Oriented*: The manager's ability to set clear goals, track progress, and adjust strategies for achieving desired outcomes, encouraging shared leadership and empowering team members to enhance motivation and engagement, and effective communication of goals, expectations, and progress, as well as inspiring and motivating

employees, is key to driving results. Finally, (4) *Effective task organisation*: Experience and knowledge in project management methodologies and tools are valuable for efficient task organisation, effective allocation of resources and prioritisation of tasks to optimise productivity, and the ability to delegate tasks appropriately can free up time for strategic thinking and problem-solving.

The ranking of managerial effectiveness dimensions in **Table 4.9**, demonstrates the influence of managerial competence on managerial effectiveness under the mediating influence of team cohesion. Hence, the ranking order in **Table 4.9**, is determined partly by the ranking order of managerial competence dimensions and partly by the ranking order of team cohesion dimensions.

First in the ranking is relationship building between the manager and the workforce, and has been theorized in this study to improve conflict resolution and productivity. Effective relationship is strengthened by mutual trust and respect among the parties involved, shared vision, role complementarity and role clarity (Chell & Tracey, 2005). The importance of shared vision was emphasised earlier as it was able to enhance relationship management in the literature (Yongcai, 2010). Hence, the effectiveness of an SME manager/owner can be examined from a relationship-building perspective through the presence of mutual trust and respect, shared vision, role complementarity and role clarity.

The second-ranking dimension of ME is Teamwork, where the manager provides clear guidance and direction to assist members in understanding their roles and responsibilities. This, again, agrees with the gains of relationship building through shared vision. When related to the dimensions of problem-solving and effective leadership competencies of the manager, teamwork enables the manager to improve both skills. This is corroborated by a previous study (Kim, 2020), which suggests that leadership behaviour in SMEs influences teamwork, and encourages SME owners to develop teamwork competence. Already, team spirit, team

communication, team collaboration and team recognition have been recommended as team-oriented competencies for SME managers/owners to develop for survival (Nwankwo & Kanyangale, 2022). The outcome of the current study partly agrees with the findings in the literature (Kim, 2020; Nwankwo & Kanyangale, 2022), and suggests that SME managers/owners should drive teamwork for enhanced performance.

From a results-oriented perspective, the study posits that SME managers/owners should be able to set goals, track work progress, empower the team, and communicate effectively. This is corroborated in the literature (Analoui et al., 2010), where the findings suggest that people and task management define managerial effectiveness. Thus, the current study shows that people management encompasses *team empowerment* and *communication*, while task management implies *setting goals* and *tracking work progress*. In effect, a results-oriented approach has been suggested as a factor in the digital transformation of SMEs to enhance their forward-looking focus on survival (Rajagopal et al., 2024).

Finally, efficient task organisation as applied in this study, emphasised that experience in project management enhances task organisation, resource allocation, and delegation, and enables the SME manager/owner to dedicate time to strategic thinking and problem-solving. To achieve this, (Bellotti et al., 2004) suggest that managers should outline the factors that enhance tasks completion and the resources needed with emphasis on urgency. It has been suggested in the literature (Jyothi & Parkavi, 2016), that a task management effort for organising, scheduling and delegating tasks should be based on priority-driven segregation.

In summary, the relationship-building dimension of managerial effectiveness ranks highest, emphasising mutual trust, respect, shared vision, and role clarity to enhance conflict resolution and productivity. Teamwork follows, with managers guiding role clarity and promoting collaboration, which strengthens leadership and problem-solving skills. A results-oriented approach highlights goal setting, progress tracking, and team empowerment. Effective

task organisation, supported by project management experience, focuses on prioritising, scheduling, and resource allocation for strategic thinking and problem-solving.

Ranked Dimensions of Team Cohesion

This section explains the ranked dimensions of team cohesion from the ranked outcome of the simulated SEM for the measured dimensions is presented **Table 4.10**. The explanation provided is based on the coding for each question in the survey tool under each dimension. As seen in **Table 4.10** and **Table 4.11** the outer loadings of all measured variables are >0.7 , suggesting a strong effect.

Table 4.10

Ranked Measured Variables of Task Cohesion Dimensions

S/N	Measured Variables of Task Cohesion	Domain	Outer Loadings	P values	Ranking
1	TCTC4 <- Task_Cohesion (TCSC)_Mediator 1	Cooperation and Collaboration	0.906	0.000	↓ Decreasing
2	TCTC6 <- Task_Cohesion (TCSC)_Mediator 1	Conflict Resolution	0.877	0.000	
3	TCTC2 <- Task_Cohesion (TCSC)_Mediator 1	Goal Clarity	0.863	0.000	
4	TCTC1 <- Task_Cohesion (TCSC)_Mediator 1	Communication	0.814	0.000	
5	TCTC5 <- Task_Cohesion (TCSC)_Mediator 1	Trust and Support	0.804	0.000	
6	TCTC3 <- Task_Cohesion (TCSC)_Mediator 1	Role Clarity	0.774	0.000	

Table 4.11

Ranked Measured Variables of Social Cohesion Dimensions

S/N	Measured Variables of Social Cohesion	Domain	Outer Loadings	P values	Ranking
1	TCSC5 <- Social Cohesion_Mediator 2	Inclusion and Diversity	0.940	0.000	↓ Decreasing
2	TCSC2 <- Social Cohesion_Mediator 2	Trust and Belonginess	0.924	0.000	
3	TCSC6 <- Social Cohesion_Mediator 2	Conflict Management	0.910	0.000	
4	TCSC4 <- Social Cohesion_Mediator 2	Empathy and Support	0.909	0.000	
5	TCSC1 <- Social Cohesion_Mediator 2	Social Interaction	0.813	0.000	
6	TCSC3 <- Social Cohesion_Mediator 2	Shared values and Norms	0.748	0.000	

The first 4 ranked significant outer loadings at $p=0.000$ for social cohesion are as follows: (i) Inclusion and Diversity (TCSC5: 0.940), suggesting the acceptance and respect of diverse perspectives and backgrounds within the team; (ii) (TCSC2: 0.924), indicating the presence of trust and acceptance within the team; (iii) Conflict Management (TCSC6: 0.910), emphasising that conflicts are effectively handled within the team; and (iv) Empathy and

Support (TCSC4: 0.909), where team members are willing to listen, understand, and provide assistance to each other. The 5th outer loading for social cohesion (TCSC1: 0.813, $p=0.000$) is related to how team members engage in social interactions, such as casual conversations and team-building exercises. The 6th row outer loading for social cohesion (TCSC3: 0.748, $p=0.000$) expresses that the team members share common values and norms.

Also, for task cohesion, the first 4 rows of outer significant loadings at $p=0.000$ are as follows: (i) Cooperation and Collaboration (TCTC4: 0.906), where team members work together, assist each other, and engage in joint problem-solving activities; (ii) Conflict Resolution (TCTC6: 0.877), showing that conflicts are effectively resolved within the team; (iii) Goal Clarity (TCTC2: 0.863), where team members understand and align their tasks with the organisational goals; and (iv) Communication (TCTC1: 0.814), suggesting that the frequency and quality of communication within the team, including information sharing and feedback among team members improves productivity. On the 5th and 6th rows are significant outer loadings at $p=0.000$ relating to task cohesion as follows: (v) Trust and Support (TCTC5: 0.804), where employees trust other team members and feel psychologically safe to express their personal opinions and can take job-related risks within the team; and (vi) Role Clarity (TCTC3: 0.774), where employees are clear about their role within the team and the roles of other team members.

The ranked positions of each defining variable of both social and task cohesion are presented in **Table 4.12** and **Table 4.13**. From here, the study suggests that the measured variables with the highest factors are those of social cohesion. This corroborates previous research in the literature (Umuteme, 2024), that the socialising process determines the extent of team effectiveness in projects in the oil and gas industry in Nigeria.

Table 4.12*Ranked Dimensions of Task Cohesion*

S/N	Dimension	Description	Concept
7	Cooperation and Collaboration	Strong emphasis on working together, assisting each other, and joint problem-solving.	Task Cohesion
8	Conflict Resolution	Effective resolution of conflicts within the team.	
9	Goal Clarity	Clear understanding and alignment of tasks with organizational goals.	
10	Communication	Frequent and quality communication, including information sharing and feedback.	
11	Trust and Support	A sense of trust and psychological safety within the team.	
12	Role Clarity	Clear understanding of individual and team roles.	

Table 4.13*Ranked Dimensions of Social Cohesion*

S/N	Dimension	Description	Concept
1	Inclusion and Diversity	Strong emphasis on accepting and respecting diverse perspectives and backgrounds.	Social Cohesion
2	Trust and Acceptance	High level of trust and acceptance among team members.	
3	Conflict Management	Effective handling of conflicts within the team.	
4	Empathy and Support	Willingness to listen, understand, and provide assistance to each other.	
5	Social Interaction	Engagement in social interactions such as casual conversations and team-building exercises.	
6	Shared Values and Norms	A sense of shared values and norms among team members.	

The table highlights two key concepts in team cohesion in the order of significance from the study: *Task Cohesion* and *Social Cohesion*, each encompassing various dimensions essential for effective team bonding. *Task Cohesion* focuses on achieving goals efficiently through Cooperation and Collaboration, Conflict Resolution, Goal Clarity, Communication, Trust and Support, and Role Clarity, ensuring alignment, clear roles, and effective communication. *Social Cohesion* emphasises interpersonal relationships, including Inclusion and Diversity, Trust and Acceptance, Conflict Management, Empathy and Support, Social Interaction, and Shared Values and Norms, all of which encourages mutual understanding and

connection. Together, these dimensions promote both relational harmony and task-oriented collaboration within teams.

Research Question 1 (RQ1): *What are the Managerial Competencies influencing Managerial Effectiveness in SMEs in the oil and gas industry in Nigeria, Port Harcourt from the perspective of Team Cohesion?*

From the simulated conceptual framework, a strong positive and significant relationship cause-effect relationship exists between managerial competence and managerial effectiveness under the mediating effect of team cohesion. Also, the correlational coefficient between both concepts is very strong, positive and significant. As stated earlier, the two key dimensions driving managerial competence, with outer loadings greater than 0.8 ($p < 0.05$), are problem-solving and effective leadership. Also, for ME, the key dimensions >0.8 ($p < 0.05$) include relationship building, teamwork, result-oriented, and efficient task organisation. The impact of managerial competence on managerial effectiveness, mediated by team cohesion, highlights the critical role of strong competencies in effective leadership and problem-solving. These competencies drive relationship-building, stimulate teamwork, promote results-oriented work approaches, and enable efficient task organisation.

Research Question 2 (RQ2): *How does the mediating influence of Team Cohesion affect the relationship between Managerial competencies and Managerial Effectiveness in SMEs in the Nigerian oil and gas industry, Port Harcourt?*

When the outcome in Hypotheses 6 and 7 was compared with Hypothesis 1, the path-coefficient between MC and ME reduced under the mediating effect of team cohesion. The strong mediating effect was mainly sustained by task cohesion with all outer loadings of the measured dimensions as indicated in **Table 4.12**. This suggests that the primary focus of strong managerial competencies in problem-solving and effective leadership should be on enhancing both task and social bonding within the team.

Research Question 3 (RQ3): *How does the moderating role of Role Ambiguity and Role Conflict influence the direct relationship between Team Cohesion and Managerial Effectiveness in SMEs in the Nigerian oil and gas industry, Port Harcourt?*

The findings of this study reveal a non-significant moderating effect of uncertainty management on team cohesion. This outcome is primarily influenced by the level of educational attainment, as indicated by the demographic analysis. Furthermore, the ranking of managerial competence dimensions highlights a strong emphasis on *problem-solving*, followed by *effective leadership*. Notably, the highest-ranking dimension of managerial effectiveness is *relationship building*, which supports shared vision and promotes collaboration within the team. The dimensions of team cohesion highlight a strong emphasis on *diversity and inclusion* as the top-ranking factor in social cohesion, while *cooperation and collaboration* rank highest in task cohesion. Consequently, *role conflict and role ambiguity within uncertainty management are unable to moderate team cohesion in a work environment characterised by problem-solving skills, effective leadership, relationship building, cooperation and collaboration, and diversity and inclusion.*

Chapter 4 Summary

This study addresses a critical gap in the literature by exploring the competencies required by owners of small and medium enterprises (SMEs) in the Nigerian oil and gas sector to improve team cohesion, enhance managerial effectiveness, and mitigate role conflict and role ambiguity. Specifically, it investigates the direct causal relationship between managerial competence and both managerial effectiveness and team cohesion. Additionally, it examines the moderating role of uncertainty management in the relationship between team cohesion and managerial effectiveness. The research is set within the context of Nigeria's oil and gas industry, offering insights relevant to a key economic sector.

To achieve these objectives, the study employs structural equation modelling (SEM) to analyse field data. SEM is used for cause-effect regression analysis, variable correlation, and factor analysis. Through this method, the study tests 11 hypotheses, aiming to understand the complex interactions among the latent variables. Of these hypotheses, 7 were supported, providing evidence for the direct impact of managerial competence on managerial effectiveness and team cohesion. However, 4 hypotheses related to the moderating role of uncertainty management were rejected, suggesting that uncertainty management does not significantly influence the relationship between team cohesion and managerial effectiveness.

Generally, this research contributes to the understanding of how managerial competence influences SMEs performance, particularly in the dynamic business environment of oil and gas sector. It highlights the importance of developing core managerial skills to promote cohesive teams and effective management, while also noting the limited role that uncertainty management plays in moderating these relationships. These findings offer practical implications as discussed later in chapter 5, for SME owners seeking to sustain their business. The sections that follow provide the summaries of each section discussed in this chapter.

Pilot Study and Instrument Reliability Check

The chapter discusses the reliability and validation of the survey instrument. A pilot study involving 50 participants was conducted from June 20 to July 18, 2024, with delays attributed to slow response rates. Access to participants was facilitated through human resource managers of four small and medium enterprises (SMEs). To ensure the instrument's reliability, Cronbach's alpha was employed, revealing that all measured variables had reliability coefficients greater than 0.7, indicating strong internal consistency. Furthermore, exploratory factor analysis (EFA), principal component analysis (PCA), and confirmatory factor analysis (CFA) were conducted, resulting in a reduction from 10 to 7 key variables for measuring uncertainty management. The high Cronbach's alpha necessitated adjustments in the effect size

used for calculating the sample size, which was increased from 0.15 to 0.25, following Cohen's (1998) guidelines. Using G*Power software, the final sample size was determined to be 211, based on an effect size of 0.25, an alpha level of 0.05, a power (beta) of 0.8, and 84 predictors. These predictors were derived by multiplying the 12 factors of team cohesion by the 7 factors related to uncertainty management.

Structural Equation Model Reliability and Validity

The study employed structural equation modelling (SEM) using the Partial Least Squares (PLS) approach to analyse data from 221 participants. The sample size, determined via G*Power software, was suitable for SEM, particularly because the data was not normally distributed. SEM analysis was conducted using SmartPLS software, with data collected through an online survey via Google Forms and managed in Excel. A bootstrapping simulation of 5,000 subsamples assessed the model's stability, retrieving key parameters such as path coefficients, coefficients of determination (R^2), reliability, validity, outer loadings, and statistical significance. Path coefficients explained direct relationships between constructs, while R^2 demonstrated the explanatory power of the model.

Reliability testing emphasised internal consistency, with Cronbach's alpha values exceeding 0.7, indicating strong internal consistency across measured variables. Cronbach's alpha highlighted the robustness of the SEM, with values nearing 1.0, suggesting the survey items could serve as standalone measures.

Convergent validity was evaluated using the Average Variance Extracted (AVE), with values exceeding 0.5 for all constructs, as per Hair et al. (2017), confirming that the constructs effectively captured the variance in their variables. This demonstrated that the SEM constructs were adequately represented and valid for further analysis.

Discriminant validity was assessed through the Heterotrait-Monotrait (HTMT) ratio criterion. The HTMT ratio was above 0.9 for certain constructs like managerial competence

and effectiveness, indicating conceptual overlap. This finding suggests a significant relationship where managerial competence directly influences managerial effectiveness. Similarly, the HTMT ratio revealed a strong relationship between team cohesion and managerial effectiveness, highlighting team cohesion's critical impact. Conversely, the role conflict's moderating effect on managerial competence and team cohesion also showed a high HTMT ratio, underscoring its influence on team performance. Role ambiguity, however, demonstrated higher discriminant validity, indicating less overlap.

The SEM reliability and validity tests confirm the robustness of the SEM. Cronbach's alpha confirmed internal consistency, AVE demonstrated convergent validity, and the HTMT ratio provided insights into the discriminant validity of the concepts.

Results: Descriptive Statistics

The study surveyed 221 participants via an online form, all of whom provided informed consent. Age distribution shows the largest group (29.4%) in the 36-40 age range, with 73.3% of respondents aged 36 and above, indicating an experienced workforce with potential for mentorship. However, the lower representation of younger workers raises concerns about workforce sustainability. Gender distribution revealed a male-dominated workforce (75.1% male, 24.9% female), consistent with existing research on the Nigerian oil and gas industry. All participants were Nigerian, with 58.4% holding a Degree/HND, 28.5% a Master's, and 6.78% a Doctorate, indicating a highly educated group. Regarding industry experience, 62% of participants had over 5 years of experience, while only 16.3% had 1-2 years, further supporting the observation of a few younger entrants. Job tenure data showed that 48.4% of participants had been in the same position for over three years, suggesting limited career progression and potential stagnation. Thus, the data underscores a well-educated, experienced workforce but highlights concerns about limited job mobility and a lack of younger professionals, which may impact long-term sustainability of SMEs in this sector.

Results: Latent Variable Correlations

The relationship between managerial competence and managerial effectiveness demonstrates a strong correlation exceeding 0.9, indicating that managerial competence significantly impacts effectiveness. Additionally, correlations between managerial competence and team cohesion—both task and social—exceed 0.8, underscoring its influence on team dynamics. Similarly, managerial effectiveness shows a correlation greater than 0.8 with task and social cohesion, emphasising its critical role in encouraging cohesive teams. The data also reveal that role conflict and role ambiguity exhibit correlations above 0.7 with both managerial competence and effectiveness, highlighting the importance of reducing these factors for enhanced managerial outcomes. Consequently, the findings suggest that managerial competence and effectiveness are closely linked to team cohesion and clarity in roles, reinforcing the essential role of skilled management in organisational success.

Results: Hypotheses Testing

The research focuses on examining the relationships between various factors influencing managerial effectiveness (ME), particularly the roles of managerial competence (MC) and team cohesion, both task and social. The study includes several hypotheses to explore these relationships, testing both direct and mediating effects of cohesion types, as well as the moderating effects of role ambiguity and role conflict. Using Structural Equation Modelling (SEM), the research aims to shed light on how these elements interconnect to shape managerial performance.

Hypothesis H1 examines the direct relationship between managerial competence (MC) and managerial effectiveness (ME). The hypothesis posits that MC positively and significantly influences ME. The results from SEM show a strong and significant path coefficient of 0.920 ($p=0.000$), with an R^2 value of 0.847, indicating that MC explains 84.7% of the variance in

ME. This supports the hypothesis, suggesting that managerial competence is a critical determinant of managerial effectiveness.

Hypothesis H2 explores the relationship between managerial competence and task cohesion in teamwork. It hypothesizes a positive and significant influence of MC on task cohesion (TCTC). The findings reveal a path coefficient of 0.843 ($p=0.000$), and an R^2 value of 0.711, meaning that MC explains 71.1% of the variance in task cohesion. Although this relationship is significant, it is slightly weaker compared to that between MC and ME, which suggests that while MC plays an essential role in task cohesion, its impact on managerial effectiveness is more pronounced.

Hypothesis H3 extends the investigation to social cohesion, hypothesizing that MC positively and significantly influences social cohesion in teamwork. The SEM results indicate a path coefficient of 0.810 ($p=0.000$), with an R^2 value of 0.657, meaning that MC explains 65.7% of the variance in social cohesion. While this relationship is also significant, it is weaker than that with task cohesion, supporting the view that MC has a greater impact on task cohesion than social cohesion, likely due to its focus on production and team output.

Hypothesis H4 tests the impact of task cohesion on managerial effectiveness, hypothesizing that task cohesion positively influences ME. The SEM results indicate a path coefficient of 0.885 ($p=0.000$), with an R^2 value of 0.783, suggesting that task cohesion accounts for 78.3% of the variance in ME. Though significant, the impact of task cohesion on ME is slightly weaker than that of MC, supporting the argument that MC is a more direct determinant of ME.

Hypothesis H5 investigates the effect of social cohesion on managerial effectiveness, proposing a positive influence. The SEM results show a path coefficient of 0.872 ($p=0.000$), with an R^2 value of 0.760, indicating that social cohesion explains 76.0% of the variance in ME. While social cohesion significantly influences ME, it still has a slightly weaker impact

than MC, reinforcing the idea that managerial competence is the dominant factor driving effectiveness.

Hypothesis H6 examines the mediating effect of task cohesion between MC and ME. The results show that task cohesion partially mediates the relationship between MC and ME, reducing the direct influence of MC on ME from 0.920 to 0.614. The R^2 value for ME improves slightly from 0.847 to 0.893, suggesting that while task cohesion reduces the direct effect of MC, it enhances the overall explanatory power of the model.

Hypothesis H7 similarly investigates the mediating effect of social cohesion. The path coefficients show that social cohesion also partially mediates the relationship between MC and ME, with the direct influence of MC on ME reduced from 0.920 to 0.614, and the R^2 value for ME improving from 0.847 to 0.897. This suggests that social cohesion has a similar, though slightly less pronounced, mediating effect compared to task cohesion.

Hypotheses H8 and H9 address the moderating effects of role ambiguity on the relationships between team cohesion (both task and social) and managerial effectiveness. The results for both hypotheses show weak, non-significant moderation effects, with path coefficients of 0.006 ($p=0.586$) for social cohesion and 0.010 ($p=0.384$) for task cohesion. Despite these weak effects, the study highlights the importance of preventing role ambiguity to ensure optimal managerial effectiveness.

Hypotheses H10 and H11 examine the moderating effects of role conflict on the relationships between social and task cohesion and ME. Both hypotheses yield weak, non-significant moderation effects, with path coefficients of 0.001 ($p=0.918$) for social cohesion and 0.012 ($p=0.237$) for task cohesion. Similar to the findings for role ambiguity, these results suggest that role conflict has a minimal impact on the relationships under consideration, though it should still be managed to avoid diminishing managerial effectiveness.

In effect, the research supports the primary hypothesis that managerial competence is the strongest predictor of managerial effectiveness, followed by task cohesion, which plays a significant mediating role. Social cohesion also mediates the relationship but to a lesser extent. The moderating effects of role ambiguity and role conflict, however, appear minimal, yet underscores the importance of maintaining clear roles and minimising conflicts to optimise managerial performance. The theoretical model developed integrates several psychological and managerial theories, providing a comprehensive framework for understanding the complex interactions between managerial competence, team cohesion, and managerial effectiveness.

Evaluation of Findings

This section interprets the results of the SEM analysis, confirming the relationships between four key concepts, though uncertainty management's moderating role was not significantly supported. The concepts are defined based on the ranking of their measured dimensions. Further discussion focused on ranking the dimensions of the concepts, followed by interpreting the research questions through the findings.

Ranked Dimensions of Managerial Competence

The evaluation of managerial competence highlights key competencies for SME managers, emphasising the importance of specific skills for navigating challenges and advancing growth. The competencies are ranked as follows: (1) Problem-solving involves encouraging creativity, collaboration, and innovative solutions; (2) Effective leadership focuses on creating a positive work environment, empowering employees, and promoting innovation; (3) Efficient decision-making stresses the need for timely, informed decisions while considering various perspectives and taking calculated risks; (4) Resource optimisation is about maximising the use of resources such as human capital, technology, and financial assets; (5) Relationship management highlights the importance of building strong relationships with employees and stakeholders, resolving conflicts, and maintaining a

harmonious work environment; (6) Adaptability and flexibility are crucial for embracing change and promoting a culture of continuous learning to help employees adapt to evolving business conditions.

The study emphasises that these competencies are critical for the survival and growth of SMEs, particularly in challenging economic environments. The cited previous research shows that SME managers with the right combination of skills, strategic foresight, and adaptability are better positioned to navigate crises, improving their chances for long-term sustainability. In this study, **problem-solving** and **effective leadership** are identified as the most important competencies, with **problem-solving** involving the promotion of creativity and innovative solutions. However, many SMEs avoid adopting new innovations due to perceived complexity. Therefore, investing in new technologies and continuous employee training is necessary for growth.

Effective leadership, ranked second, is essential for creating a positive workplace where employees are empowered, which promotes innovation. Adopting an ethical leadership approach can enhance leadership effectiveness, improving teamwork, work motivation, and the acceptance of change. **Efficient decision-making**, ranked third, involves participatory leadership, where employee input enhances creativity and decision quality. **Resource optimisation**, crucial for reducing costs and ensuring efficient operations, comes next. Research shows that cost reduction was key to SME survival during Greece's economic crisis, and labour optimisation should align with work demand for better outcomes.

Relationship management, ranked fifth, is vital for conflict resolution and employee motivation. Building strong relationships and setting clear expectations can enhance performance and retention. Finally, **adaptability and flexibility**, ranked sixth, are crucial for embracing change and encouraging continuous learning, which is essential for SMEs to remain resilient. Overall, the study underscores the importance of these competencies for SME

managers to navigate challenges and ensure business success, while also suggesting that training to improve these skills is crucial for managerial effectiveness and team cohesion.

Ranked Dimensions of Managerial Effectiveness

The survey results identify four key dimensions of managerial effectiveness (ME) in SMEs in the Nigerian oil and gas industry, Port Harcourt ranked as follows: (1) Relationship Building, (2) Teamwork, (3) Result-Oriented, and (4) Effective Task Organisation.

Relationship Building ranks highest and is crucial for resolving conflicts and promoting collaboration within the team. Managers who listen actively, demonstrate empathy, and nurture mutual trust and respect can build strong relationships, improving both productivity and job satisfaction. The study emphasises the importance of a shared vision and role clarity in enhancing these relationships.

Teamwork is the second-ranked dimension, highlighting the manager's ability to provide clear guidance and advance collaboration among team members. Managers who lead by example and inspire teamwork enhance overall team performance. The study aligns with existing research suggesting that SME owners should develop teamwork skills to improve performance and leadership effectiveness.

Result-Oriented management focuses on setting clear goals, tracking progress, and empowering the team to drive results. Effective communication of goals and progress is essential for motivating employees and ensuring alignment with organisational objectives. This approach is supported by literature that suggests strong people and task management capabilities contribute significantly to managerial effectiveness (Analoui et al., 2010).

Effective Task Organisation emphasises the importance of project management skills for organising tasks, allocating resources, and prioritising activities. SME managers who can delegate effectively and focus on strategic thinking improve productivity and problem-solving.

This is consistent with research recommending task prioritisation and resource management as key to achieving organisational goals (Liang et al., 2021).

The ranking of these dimensions reflects a balance between managerial competence and team cohesion. Effective relationship-building is central to resolving conflicts and advancing trust within the workforce, while teamwork facilitates collaboration and leadership growth. A result-oriented approach ensures goals are achieved through clear communication and team empowerment, and effective task organisation enables managers to optimise resources and focus on strategic decision-making. These findings highlight the interplay between interpersonal skills, team dynamics, goal-setting, and task management in determining managerial effectiveness in SMEs in the Nigerian oil and gas industry, Port Harcourt.

Ranked Dimensions of Team Cohesion

The evaluation of team cohesion presents two key concepts: Social Cohesion and Task Cohesion, each encompassing several dimensions essential for effective team bonding and performance. Social Cohesion emphasises the importance of interpersonal relationships within a team. It includes dimensions such as Inclusion and Diversity, which stresses the need for accepting and respecting diverse backgrounds, creating an inclusive environment. Trust and Acceptance highlight the significance of mutual trust among team members, forming a solid foundation for cooperation. Conflict Management involves effectively addressing disagreements to prevent disruptions, while Empathy and Support encourage team members to listen, understand, and offer assistance to one another. Social Interaction, which involves informal engagements like casual conversations and team-building activities, further strengthens interpersonal bonds. Lastly, Shared Values and Norms develops a sense of unity by aligning team members' values and behaviours toward common goals.

On the other hand, Task Cohesion is focused on achieving team goals efficiently through collaboration and clear communication. Key dimensions include Cooperation and

Collaboration, which stresses the importance of working together, assisting each other, and joint problem-solving. Conflict Resolution ensures that conflicts are addressed in ways that align with team objectives, while Goal Clarity ensures everyone is aligned with the team's objectives. Effective Communication is crucial for sharing information and coordinating tasks, while Trust and Support create a psychologically safe environment for team members to perform at their best. Finally, Role Clarity is vital for ensuring each member understands their responsibilities, contributing to a well-organised and efficient team. Together, these dimensions promote both relational harmony and task-oriented collaboration, enhancing overall team effectiveness.

Evaluation of Research Questions

This section addresses three key research questions related to managerial competence, managerial effectiveness, and the mediating role of team cohesion in SMEs within Nigeria's oil and gas sector. The study explores how these factors interact, focusing on leadership, problem-solving, relationship-building, and teamwork. By analysing these elements through a conceptual framework, it offers insights into the dynamics that shape managerial outcomes in the context of team cohesion and organisational challenges.

Research Question 1 (RQ1) investigates the relationship between managerial competence and effectiveness within the oil and gas SMEs, emphasising the mediating role of team cohesion. The findings show a strong positive correlation between managerial competence and effectiveness, with critical dimensions such as problem-solving and effective leadership directly influencing relationship-building, teamwork, result-oriented approaches, and task organisation. These competencies drive better performance when mediated by team cohesion, and underscores the importance of leadership and problem-solving skills in sustaining effective teamwork and organisational success.

Research Question 2 (RQ2) explores how team cohesion mediates the relationship between managerial competencies and effectiveness. The analysis reveals that the impact of managerial competence on effectiveness is reduced when task and social cohesion is factored in. The outcome suggests that the development of strong ties within teams is important for enhancing the effects of managerial competencies like leadership and problem-solving. The results highlight the importance of deliberately developing both task and social connections in teams to strengthen managerial effectiveness.

Research Question 3 (RQ3) examines the moderating influence of role ambiguity and role conflict on the relationship between team cohesion and managerial effectiveness. The study finds that role ambiguity and conflict do not significantly moderate team cohesion, largely due to the influence of educational background on uncertainty management. Despite this, the research emphasises the significance of diversity, inclusion, and cooperation in promoting team cohesion and driving managerial effectiveness in the oil and gas sector.

CHAPTER 5: IMPLICATIONS, RECOMMENDATIONS, AND CONCLUSIONS

This study investigated the relationship between managerial competence and managerial effectiveness under the mediating influence of team cohesion. The moderating role of uncertainty management on team cohesion was also studied. Managerial competence was the independent variable, while managerial effectiveness and team cohesion were the dependent variables. In this study, managerial competence was measured under the six dimensions of problem-solving, effective leadership, efficient decision-making, resource optimisation, relationship management and adaptability and flexibility. Also, managerial effectiveness was measured under four dimensions including relationship building, teamwork, result-oriented, and effective task organisation. Team cohesion was categorised into social cohesion and task cohesion following the suggestion in the literature that both dimensions were responsible for team performance. A moderating effect of uncertainty management through role ambiguity and role conflict was investigated, although this yielded a non-significant effect.

The study adopted theoretical SEM constructs of the concepts discussed above that aim to strengthen team-centred cohesiveness. The adopted quantitative research approach was guided by positivist epistemology, based on the ontological perspective of enhancing the survival of SMEs. The population of the workforce in SMEs in this industry is unknown because workers are recruited and disengaged based on work demand. A sample size of 211 participants was finally estimated using G*Power software for this research after a pilot study demonstrated that the survey instrument was robust. Moreover, the study achieved 221 completed online surveys, representing 105%. This sample size is appropriate for SEM as suggested in the literature (Memon et al., 2020). The adopted sample size was aimed at minimising Type I and II errors by adopting an alpha level of 0.05 to reduce Type I errors while an 80% statistical power to reduce Type II errors as suggested in the literature (Cohen, 1988).

The survey included 57 closed-ended, 5-point Likert-scale questions based on the theoretical dimensions of each concept studied. A cross-sectional horizon design was adopted because it is assumed that the responses by each participant will not change within the period of the survey. The survey instrument was distributed to participants through the company HR manager for all participating SME companies based on the inclusion and exclusion criteria, stated as follows: (1) *Inclusion* - Participants must have a minimum of one year of work experience in SMEs within the oil and gas industry; and (2) *Exclusion* - There will be no discrimination based on disabilities; as long as the participant is capable of reading and writing and can successfully complete the questionnaire online. Managers will not be included in the research.

These companies are located in Port Harcourt, Rivers State, Nigeria, which is the hub of the oil and gas industry. Based on the sample size of 211 for the study, ten SMEs were targeted; however, only six provided gatekeeper access through a duly signed gatekeeper letter. The companies were not preselected but identified through random visits. The Unicaf University Research Ethics Committee (UREC) approval was obtained prior to field data collection. This is a low-risk research study because it does not involve participants' personal information.

Partial Least Squares Structural Equation Modeling (PLS-SEM) was chosen over Covariance-Based SEM (CB-SEM) for its specific suitability for this study, as discussed earlier in Chapter 3. Model reliability and validity checks and hypothesis testing followed the established guidelines in the literature (Cohen, 1988; Cohen et al., 2003; Hair et al., 2017). All constructs were reflective, as each measured variable effectively defined its corresponding concept. The current chapter discusses the implications of the outcome of the study, offers practical recommendations, and the main conclusions of the research.

Implications of Research

This section provides a critical reflection on the implication of the findings on the research questions. In every research session, it is important that the researcher reflect on how the current research relates to the theories in the field (Saunders et al., 2019). Hence, the implications of this study was evaluated based on the research questions and how the outcome relates to existing propositions relating to the survival of SMEs.

Research Question 1

This research question was stated as follows: *What are the Managerial Competencies influencing Managerial Effectiveness in SMEs in the oil and gas industry in Nigeria, Port Harcourt from the perspective of Team Cohesion?* The main aspects of this research question linked to the findings are the ranked dimensions of MC and ME discussed in Chapter 4 and the theoretical implication of the causal relationship between both concepts in Figure 4.18. The study answers the research question by identifying key managerial competencies (MC) and linking them to managerial effectiveness (ME) in SMEs within the Nigerian oil and gas industry from a team cohesion perspective. The outcome of this study aligns with the importance of managerial skills, experience and competence for SME managers/owners suggested in the literature (Agwu & Emeti, 2014).

The study reveals six core managerial competencies (Problem-solving, Effective leadership, Efficient decision-making, Resource optimisation, Relationship management, and Adaptability and Flexibility) that influence managerial effectiveness. These competencies directly contribute to enhancing team cohesion and emphasise the importance of collaborative problem-solving, leadership that promotes a positive work environment, and adaptability that promotes a learning culture, and these are central to team dynamics. The emphasis on problem-solving, effective leadership, decision-making, resource optimisation, relationship management, and adaptability aligns with the broader literature on managerial competencies.

The findings of this study highlight the importance of team cohesion as a critical factor in managerial effectiveness and offer a unique perspective on the subject. The two main theoretical and practical implications of the study with respect to RQ1 are as follows: (i) *Theoretical*: The outcome of this study aligns with the importance of managerial competencies for SME managers/owners suggested in the literature (Agwu & Emeti, 2014). The competencies of problem-solving, and effective leadership in this study aligns with the need for crisis management in Fonceca et al. (2017). (ii) *Practical*: The study answers the research question by identifying key managerial competencies (MC) and linking them to managerial effectiveness (ME) in SMEs within the Nigerian oil and gas industry from a team cohesion perspective.

Detailed implications in this section discussed how the findings align with and expand upon previous studies as follows.

Corporate Culture in SMEs

Corporate culture refers to the shared values, beliefs, behaviours, and attitudes that define the cultural environment in an organisation (Schein, 2010). Yongcai (2010) suggests a lack of good corporate culture in SMEs. Also, Agwu and Emeti (2014) identify simple management structure and informal employer/employee relationships as some of the weaknesses in SMEs. However, the simple managerial structure has been suggested to enhance decision making (Pilar et al., 2018). The findings on resource optimisation competence and managerial effectiveness defined by effective task organisation address the weak corporate governance identified by Yongcai. Thus, this study highlights the importance of task delegation and structured leadership to improve the survival rate of SMEs.

The tension between simplicity and structural weakness creates both a challenge and opportunities, as SMEs have the potential to build cultures that can support accountable decision-making. Research also draws a close link between managerial effectiveness and how

tasks are structured and delegated. Analoui et al. (2010) emphasise that strong management is not just about task execution but also about encouraging productive interpersonal dynamics. This balance supports cohesive teams and more efficient use of limited resources, which is critical for SMEs working to stay competitive and sustainable.

In light of this, the current study highlights the value of deliberate leadership and delegation. When managerial practices align with a supportive corporate culture that champions problem-solving, effective leadership and efficient decision making as key competencies of a manager, SMEs are better positioned to address governance gaps and build resilience in an increasingly demanding business landscape.

Financial Management and Entrepreneurial Skills

Kottika et al. (2020) suggest that *downsizing* and *prudent financial management* led to the survival of SMEs in Greece. Also, the study suggests a significant positive relationship between entrepreneurial orientation and *negotiation skills*, *optimism* and *risk-taking*. While the current study focuses on internal managerial competencies, the findings on efficient decision-making, which is the third-ranking MC and resource optimisation ranking as the fourth MC, paralleled emphasis on prudent financial management and entrepreneurial orientation in the literature (Kottika et al., 2020).

The implications of Kottika et al.'s findings underscore a critical foundation for good business practice and the drive for survival in SMEs. Effective managerial practices do not merely support daily operations; they form the backbone of an enterprise's ability to adapt, innovate, and sustain itself in volatile business environments. As the literature reveals, managerial effectiveness—particularly in resource-limited settings—creates a work culture where collaboration, motivation, and strategic alignment flourish (Pranitasari, 2019).

Moreover, this effectiveness hinges not just on inherent skills but on the deliberate application of those skills in dynamic business contexts (Boyatzis, 1982). Such active

engagement is pivotal in ensuring sound decision-making, financial prudence, and long-term vision—all of which can contribute directly to the resilience of SMEs. In reinforcing this, Diskiene et al. (2018) and Kottika et al. (2020) demonstrate how competent leadership correlates with organisational effectiveness and survival.

Entrepreneurial orientation, as emphasised by Kottika et al. (2020) and supported by Enshassi and Burgess (1991), emerges as a critical aspect of strategic leadership. It empowers managers to embrace innovation, calculated risk-taking, and adaptability—capabilities essential for navigating regulatory complexities and fierce competition (Bassey, 2025; Ihua, 2010; Ocheni, 2015). Again, the findings advocate for a redefinition of managerial roles in SMEs—not just in operations, but as strategic drivers of team-driven change.

Teamwork and Communication

The emphasis of the current study on relationship management and team-building directly supports previous findings about teamwork as a critical MC dimension. Nwankwo and Kanyangale (2022) suggest that communication plays a key role in the survival of SMEs, and that teamwork should be enhanced through team communication, team collaboration, team spirit and team recognition. Consequently, this study extends the position in the literature by relating conflict resolution and empathy as important aspects of relationship-building. Research consistently underscores the role of managerial competence in encouraging cohesive teams. Analoui et al. (2010) argue that managers who skillfully navigate both task execution and interpersonal dynamics are better positioned to cultivate cohesiveness and collaboration within teams. This view is supported by Nwankwo and Kanyangale, who highlight the importance of strategic communication in shaping a cooperative work culture, as an essential factor for SMEs facing operational uncertainties.

The focus of the current study on interpersonal management and team development aligns with Enshassi and Burgess (1991), who note that managerial style profoundly affects

organisational outcomes. The incorporation of empathy and conflict resolution as central elements of effective leadership reflects Analoui et al. (2010) broader view of management as relational as well as functional. Creating an empathetic managerial climate not only mitigates conflict but also supports team cohesion, a point reinforced by Nwankwo and Kanyangale in their emphasis on nurturing a collaborative spirit within the team.

Pranitasari (2019) emphasises the connection between a constructive work atmosphere and strong team performance, which complements Nwankwo and Kanyangale's conclusions. When communication is open and aligned with organisational goals, teams within SMEs are more likely to remain focused, adaptable, and united. Such alignment enhances managerial influence by reinforcing a culture of mutual support and accountability.

These perspectives suggest that the longevity of SMEs depends on their ability to embed effective communication and teamwork into their operational fabric. In environments characterised by volatility and regulatory demands, these elements act as stabilizing forces. Through intentional team-building and recognition strategies, SMEs can promote resilience and agility. Hence, the interplay between leadership, communication, and team dynamics forms the cornerstone of SME sustainability. SMEs can improve internal efficiency and enhance their capacity to navigate complex external landscapes through communication and teamwork.

Critical Competencies for ME

Fonceca et al. (2017) suggest that time management, creativity, and crisis management enhance managerial effectiveness in SMEs. These variables are related to the competencies of problem-solving and adaptability in this study. The broader literature strongly reinforces the view that managerial effectiveness is a complex, evolving construct. Analoui et al. (2010) highlight the dual responsibility of managing both tasks and people, stressing that adaptability in the face of challenges is vital for sustaining team cohesion and meeting strategic goals.

Enshassi and Burgess (1991) further demonstrate that managerial style plays a decisive role in determining effectiveness, particularly in settings with high variability. This is especially relevant in the oil and gas sector, where SMEs grapple with tight resources and a dense regulatory landscape (Bassey, 2025; Ihua, 2010). In such contexts, the competencies identified by Fonceca et al. (2017)—time management, creativity, and crisis response—are not just useful but essential for effective management.

These capabilities have clear implications for SME survival in this sector. With the pressure of constant competition and operational complexity, firms that can manage time well, innovate under pressure, and respond swiftly to disruption are more likely to stay resilient and agile. This agility not only improves day-to-day efficiency but also advances an engaged workforce, contributing to long-term viability. As such, cultivating these core managerial skills is not optional, but a strategic necessity for SMEs seeking to endure and grow in a volatile business environment.

Organisational Learning

Lara and Salas-Vallina (2017) emphasise the importance of organisational learning capability in promoting positive attitudinal outcomes among managers. This is corroborated in the current study, where the adaptability and flexibility competence of the manager is linked to embracing change, promoting a culture of continuous learning, and equipping employees to adapt to evolving business conditions.

Building on this, Atiase et al. (2023) highlight the importance of continuous learning as a managerial competency, especially in dynamic sectors such as oil and gas. They emphasise that the capacity to navigate change and support team learning is not only beneficial but essential to maintaining organisational relevance and driving performance.

Similarly, Quansah et al. (2022) demonstrate that leaders who champion a culture of learning empower their teams to better adapt to shifting business conditions. This is particularly

relevant for SMEs operating in high-risk industries, where agility and innovation often determine long-term viability. In this context, the literature (Bakare et al., 2024; Laudert, 2018), notes that promoting an adaptive and skilled workforce enables SMEs to manage industry-specific challenges such as fluctuating regulations and competition more effectively.

Thus, the presence of adaptability and flexibility as a competence suggest that SMEs in the oil and gas sector, must embed learning and adaptability into their core operations is not optional but strategic. This is expected to strengthen team resilience, and support sustained competitiveness.

Managerial Competency Theory

Boyatzis (2008) expressed managerial competence through three key intelligences: emotional intelligence (EI), social intelligence (SI), and cognitive intelligence (CI). These frameworks closely relate to the findings of the current study, particularly within the context of team cohesion in SMEs in the Nigerian oil and gas industry.

In this study, EI relates to (1) Relationship Management, as managers demonstrate empathy, active listening, and conflict resolution, and (2) Effective Leadership, where managers empower employees and promote a positive work environment by demonstrating emotional and motivational skills. Again, SI emphasises understanding social dynamics, building networks, and managing interactions within the team. The SI aspect of Boyatzis' competency theory relates to the following dimensions of managerial effectiveness in this study: (1) Teamwork, as managers provide guidance, inspire collaboration, and encourage team cohesion, and (2) Relationship Building, where managers promote trust, resolve conflicts, and facilitate effective communication. Finally, the CI aspect relates to analytical thinking, problem-solving, and decision-making. These are central to the findings of this study as follows: (1) Problem-solving competence, which enables managers to encourage creative thinking and innovative solutions; (2) Efficient decision-making competence, which enables

the manager to make informed decisions by analysing multiple perspectives; and (3) Resource optimisation competence shows that managers need to use strategic thinking and project management tools to improve task organisation aspect of managerial effectiveness. In-depth analysis of how the outcome of the current study aligns with the three level of intelligences outlined in the literature (Boyatzis, 2008) will be discussed in turn as follows:

Emotional Intelligence (EI), particularly through relationship management and effective leadership (Goleman et al., 2013), plays a critical role in the survival of SMEs by fostering a workplace culture of empathy, trust, and resilience. Managers who exhibit high EI can maintain employee morale during turbulent periods, such as economic downturns or pandemics, ensuring continuity through stronger team cohesion and motivation. Also, the literature (Prati et al., 2003), highlights how emotionally intelligent leaders build emotionally robust teams, directly linking EI to higher employee engagement and improved business outcomes.

Goleman et al. (2013), supports the need for emotionally intelligent leaders who demonstrate self-awareness, empathy, motivation, and a collaborative mindset. The authors contend that in an increasingly volatile business landscape and a rapidly advancing technological world, emotional intelligence is not just a personal trait but a strategic leadership asset. As businesses become complex administratively, the ability to understand and manage emotions—both one's own and others'—becomes essential for building trust, and leading through uncertainty. This aspect of the discussion corroborates the outcome of the study where problem-solving, effective leadership and efficient decision making are three key managerial competencies to drive team cohesion and enhance relationship building.

Social Intelligence (SI) is the ability to manage relationships based on the thoughts and feelings of others (Buchanan & Huczynski, 2017). It underpins teamwork and relationship-building, both internally among employees and externally with clients and partners. SI allows

leaders to cultivate trust, encourage open communication, and strengthen collaboration. Accordingly, Buchanan and Huczynaki (2017) suggest that CI includes two main skills: social awareness and social facility. Social awareness means picking up on how others feel—like sensing emotions from facial expressions, paying close attention to understand someone fully, and recognising what people are thinking or feeling. It also involves knowing how social situations work and what behaviour is expected. Social facility is about how we interact—using the right tone, gestures, and timing, being able to influence how others feel, guiding social situations smoothly, and showing real care and empathy for others. These dynamics of social integration are influenced by “relationship management” competencies of the manager investigated in this PhD work.

Cognitive Intelligence (CI) is related to learning and problem-solving through the analysis of insights and understanding (Buchanan & Huczynski, 2017). Its focus is on analytical thinking and decision-making, and equips SME managers with the capability to navigate complex business conditions and optimise limited resources effectively. Robbins and Judge (2024) suggest *cognitive flexibility*, which is the ability of a manager to select the most appropriate decision-making strategy as most suitable for better decisions in both poorly and well-structured business conditions. Thus, CI-driven competencies help SME managers to identify emerging opportunities, implement efficient operational strategies, and respond swiftly to disruptions. According to Chowdhury et al. (2022) and Singh & Verma (2023), SMEs led by cognitively adept individuals are better positioned to make agile strategic decisions, enhancing both financial performance and long-term viability.

In effect, EI, SI, and CI form a triad level of managerial intelligences that supports comprehensive, and resilient management of SMEs

Research Question 2

This research question was stated as follows: *How does the mediating influence of Team Cohesion affect the relationship between Managerial competencies and Managerial Effectiveness in the Nigerian oil and gas industry, Port Harcourt ?* The objective was to examine the mediating role of team cohesion, identify whether task or social cohesion has a greater influence, and determine the key variables for both dimensions of team cohesion based on their rankings. Evidence in the literature (Salas et al., 2015) suggests that both dimensions of team cohesion are associated with high team performance; therefore, they have been adopted for the study.

The findings suggest that task cohesion has a greater mediating influence than social cohesion. For both dimensions, social cohesion was mainly influenced by *Inclusion and Diversity*, while task cohesion was by *Cooperation and Collaboration*. The findings tie closely to the research question by illustrating the pivotal role of team cohesion as a mediator and builds on previous studies by refining and ranking critical dimensions of cohesion and managerial effectiveness, and offers a robust a framework for enhancing team dynamics in SMEs. The two main theoretical and practical implications of the study with respect to RQ are as follows: (i) *Theoretical*: Previous study suggest that both dimensions of team cohesion are associated with high team performance (Salas et al., 2015). (ii) *Practical*: The findings of this study suggest that social cohesion has a greater mediating influence than task cohesion. For social cohesion, Inclusion and Diversity ranked highest, and for Task Cohesion, Cooperation and Collaboration ranked highest. The theoretical position of the findings presents the following implications in alignment with previous studies.

Social Cohesion and Performance

The findings that social cohesion mediates the direct relationship between MC and ME align with the empirical outcome in the literature (Umuteme, 2024) that the social dimension

of team effectiveness influences project team performance in the oil and gas industry in Nigeria. It also complements the idea of Chiniara and Bentein (2018) that social distinctions can negatively impact cohesion, thus implying the importance of inclusion and diversity to counteract such effects. The takeaway is clear: robust team dynamics and interpersonal trust are central to managerial success, especially in environments marked by competition and limited resources such as SMEs.

Additionally, the caution that social fragmentation within teams can destroy cohesion, shows that diversity and inclusion are not just ethical considerations; they are strategic tools. When SMEs promote inclusive cultures, they reinforce cohesion that strengthens managerial impact in the team. For SMEs in the oil and gas industry, where the stakes are high (Bakare et al., 2024), survival hinges on agile, cohesive leadership capable of navigating through regulatory hurdles and scarcity of resources. Managers who intentionally cultivate cohesive, inclusive teams are better positioned to drive engagement, simplify communication, and sustain performance.

Reinforcement of Theoretical Frameworks

Social Identity Theory (Tajfel & Turner, 1979) and Social Cognitive Theory (Bandura, 1986b) are reflected in the findings. For example, promoting *Inclusion and Diversity* aligns with the need of individuals in a group to enhance their affiliations with other members of the group to shape interpersonal dynamics. Again, the findings of cooperation and collaboration ranking highest in task cohesion reflect concepts from Social Comparison Theory by Festinger (1954), where comparisons among team members influence cohesion and performance. The study aligns with the idea that social identity and group affiliation play a significant role in team cohesion, and that individuals derive a sense of belonging and self-esteem from their group memberships.

The dimensions categorised under Social Cohesion, such as Inclusion and Diversity, Trust and Acceptance, Shared Values and Norms, and Social Interaction, highlight how individuals form a sense of belonging and in-group identity within teams. These findings reinforce Tajfel and Turner's notion that positive group identification enhances intra-group trust and cooperation. Moreover, the emphasis on shared values and psychological safety suggests that identity is reinforced not only by membership but also by mutual respect and value alignment

Furthermore, the Task Cohesion dimensions: Communication, Role Clarity, Goal Clarity, and Trust and Support, reflect key elements of Social Cognitive Theory. The results demonstrate how team members learn effective behaviours through problem-solving, conflict resolution, and cooperation by interaction and modelling the expected behaviour within a psychologically safe environment. This supports Bandura's emphasis on observational learning and highlights the role of team norms and interpersonal dynamics in shaping self-efficacy and collaborative work behaviour.

Managerial Competencies and Team Cohesion

The managerial competency theory (Boyatzis, 2008) highlights the importance of teamwork and relationship-building through the social intelligence competence of the manager, which is reflected in the findings of this study that managerial competencies directly enhance team cohesion and effectiveness. The emphasis on adaptability and decision-making as critical competencies supports the literature (Fonceca et al., 2017), on the need for crisis management within the team to enhance cohesion.

This research emphasises *Inclusion and Diversity* and *Cooperation and Collaboration* as top-ranking factors, providing a prioritised framework for managers to strengthen team cohesion. It enhances the work in the literature (Al-Rawi, 2008), suggesting that cohesiveness in the team is linked to value commitment by linking team commitment to specific managerial

competencies and team cohesion dimensions. The strong correlations between the MC, ME and TC suggest that effective managers promote cohesive teams, which in turn leads to improved performance. The study identified task cohesion as a more significant mediator than social cohesion. This aligns with the emphasis on social dynamics in theories like Social Identity Theory and Social Cognitive Theory. It suggests that developing strong interpersonal relationships and having a sense of belonging is essential for team effectiveness.

The current research provides valuable insights into the complex interplay between managerial competencies, team cohesion, and managerial effectiveness. Hence, identifying the key dimensions of team cohesion and their impact on SME survival, enabled this study offers practical implications for SME organisations that seeks to improve team dynamics and achieve their goals.

Research Question 3

This research question was stated as follows: *How does the moderating role of Role Ambiguity and Role Conflict influence the direct relationship between Team Cohesion and Managerial Effectiveness in the Nigerian oil and gas industry, Port Harcourt ?* The findings suggests a non-significant moderating effect of uncertainty management on team cohesion. This outcome is primarily influenced by the level of educational attainment, as indicated by the demographic analysis. Based on the findings, it was theorised that *“role conflict and role ambiguity within uncertainty management are unable to moderate team cohesion in a work environment characterised by problem-solving skills, effective leadership, relationship building, diversity and inclusion, and cooperation and collaboration.”* While there is no definitive literature directly supporting the claim that the listed positive attributes can completely negate the negative impact of role conflict and ambiguity moderation on team cohesion, the following studies suggest that these factors can mitigate their effect.

The study observed the presence of effective leadership as a managerial competence that promotes a positive work environment, empowers employees, and promotes innovation. This finding is reinforced by the composition of the study's participants, of whom 93% possess post-secondary education—58.4% holding Degrees or HNDs, 28.5% with Master's degrees, and 6.78% with Doctorates. In contrast, only 1.36% held only a high school certificate, and 2.26% had diplomas. This reflects a highly educated and informed sample, especially when compared to the general Nigerian labour force, where 86% reportedly lack post-secondary education (Orimisan, 2024). The high educational qualifications of the participants may have contributed to their heightened responsiveness to effective leadership and innovation practices, thereby reducing the potential moderating effect of role ambiguity. This aligns with findings in the literature (Maden-Eyiusta, 2021) on the negative correlation between role ambiguity and innovation, and supports why, in this study, role ambiguity did not significantly moderate the mediating role of team cohesion. However, since individuals without post-secondary education also work in SMEs, this demographic skew limits the generalisability of the findings beyond the context of the oil and gas industry.

Thus, the two main theoretical and practical implications of the study with respect to RQ are as follows: (i) *Theoretical*: The negative correlation between role ambiguity and innovation indicated in the literature (Maden-Eyiusta, 2021) supports why role ambiguity did not moderate the mediating role of team cohesion. (ii) *Practical*: The study outcome suggest that role conflict and role ambiguity are unable to moderate team cohesion in a work environment characterised by problem-solving skills, effective leadership, relationship building, diversity and inclusion, and cooperation and collaboration.

Recommendations for Application

Small and Medium Enterprises (SMEs) play a pivotal role in the global economy (Bouzari et al., 2023), as they contribute to increasing employment and GDP (Bawono et al.,

2022). However, their survival in dynamic and often volatile business environments depends on robust managerial strategies and cohesive team dynamics. Based on the findings of this study, the recommendation for application focused on a Team-Sensitive Managerial Competence Framework for SME sustainability.

Framework Overview

The frameworks address the essential competencies required for SME survival. Each framework is comprised of dimensions that focus on specific managerial and team-oriented challenges. These frameworks align with SMEs' survival and success imperatives by embedding team sensitivity into core managerial competence and effectiveness. SMEDAN, as a government agency in Nigeria, already provides support to SMEs (SMEDAN/NBS, 2017). The findings of this study can serve as a foundation for policy implementation to mandate competency development for SME owners in key areas such as problem-solving, effective leadership, efficient decision-making, resource optimisation, adaptability and flexibility, and relationship management. Additionally, SMEDAN should require SME owners to train their staff and encourage the adoption of new technologies and innovations to enhance business growth and sustainability.

Team-Sensitive Managerial Competence Framework

According to the definition suggested by the International Atomic Energy Agency (IAEA), “A competency framework is a model that broadly describes performance excellence within an organisation” (IAEA, 2024, p. 3). This definition aligns with the findings of this study, which demonstrate that managerial competence functions as a foundational mechanism through which managerial effectiveness and team cohesion are achieved in SMEs. Consistent with the extensive literature, managerial competence encapsulates observable behaviours, skills, and actions that enable managers to translate strategy into effective people and task management (Boyatzis, 1982, 2008; Analoui et al., 2010). Therefore, the ranked dimensions

of managerial competence are aimed at providing the needed guide to assist SME owners/managers with a developmental framework to enhance performance excellence. In line with the theory of action and job performance in the literature (Boyatzis, 1982, 2008; Ruth, 2006), which suggests the need for managers to be involved in organisational activities that enhance work output, the team-sensitive managerial competence framework suggested in this work prioritises core competencies investigated in this research for performance excellence.

These competencies including problem-solving, effective leadership, decision-making, resource optimisation, relationship management, and adaptability and flexibility, are essential for navigating complex business environments. This framework underscores the importance of managers improving their team-centred competencies. In this section, efforts were made to suggest how the SME owners/managers can develop each of the ranked competencies as managerial implications.

Managerial Implication 1: Developing Problem-Solving Competence

As discussed earlier in Chapter 4, the problem-solving competence needed by SME owners/managers is linked to encouraging (1) creativity, (2) collaboration, and (2) the implementation of innovative solutions. Creativity is the generation of new ideas (Daft, 2012). Hence, SME managers can encourage the staff to evolve new ways of doing the same job better. Employee mentorship programs or training workshops have been suggested in the literature (Perks, 2010) as potential solutions to address problems in SMEs.

Also, Bouzari et al. (2023) emphasised that problem-solving in SMEs requires both cognitive and physical actions, hence involving logical reasoning. Furthermore, the literature also stressed the need for SMEs to invest in technology and innovation. Problem-solving competence requires that managers develop the ability to manage the knowledge generated in the organisation for enhanced performance. This is corroborated in the study by Bawono et al. (2022) where the authors suggest that both innovation and knowledge are essential elements

for effectively solving problems. This approach not only boosts efficiency but can also equip employees with required tools to collaboratively address complex problems.

Therefore, to develop problem-solving competence in creativity, collaboration, and the implementation of innovative solutions, the SME owner/manager can: (1) Organise mentorship programs and training workshops to encourage creative thinking and collaborative problem-solving among employees. These platforms allow managers and employees to exchange knowledge, share innovative ideas, and develop critical thinking skills necessary for tackling challenges in SMEs (Perks, 2010). (2) SME managers should encourage and model logical reasoning in decision-making processes, as problem-solving requires both cognitive and physical actions. This can involve engaging employees in structured problem analysis and evidence-based solutions (Bouzari et al., 2023). (3) Integrating advanced technologies and supporting a culture of innovation to enable managers to improve their ability to implement creative solutions. (4) The managers of SMEs must prioritise the effective management of organisational knowledge. This can include the documentation of best practices, facilitating information sharing, and promoting a learning culture. Knowledge serves as a foundation for innovation, which can enable the workforce to generate and refine creative solutions (Bawono et al., 2022). (5) To successfully implement innovative ideas, managers should focus on balancing the acquisition and application of knowledge with creative thinking. This can provide an opportunity for the employees to experiment with new ideas, take calculated risks, and learn from the outcomes to continuously improve innovation and collaboration.

Thus, developing problem-solving competence in SMEs requires a strategic approach that integrates creativity, collaboration, and innovation. By organising mentorship programs and training workshops, managers can cultivate an environment where employees develop critical thinking and innovative skills. Additionally, promoting logical reasoning and structured problem-solving processes enhances cognitive abilities and supports evidence-based decisions.

The adoption of advanced technologies and a culture of innovation is crucial for generating creative solutions, while effective knowledge management ensures that valuable insights and best practices are leveraged for continuous improvement. By balancing knowledge acquisition with creative thinking, SME managers can empower their workforce to collaborate effectively and implement sustainable innovations that drive organisational success.

The identified competence in problem-solving—which involves encouraging creativity, collaboration, and innovative solutions—is a primary driver behind the strong paths from Managerial Competence to Task Cohesion ($\beta=0.81$, $p=0.00$) and Social Cohesion ($\beta=0.84$, $p=0.00$). A manager skilled in collaborative problem-solving inherently fosters a team environment aligned with the top dimensions of cohesion: Cooperation and Collaboration (Task Cohesion) and an inclusive climate for Trust and Acceptance (Social Cohesion). Consequently, this competence is fundamental to activating the significant mediating pathways through which cohesion enhances Managerial Effectiveness (H6a, H7a).

Therefore, based on the assertion of the relevance of problem-solving as a competence needed by SME managers to enhance managerial effectiveness and team cohesion in the literature review in Chapter 2, its critical importance is further reinforced by several key studies. Innovation, as highlighted by Bouzari et al. (2023), is essential for the survival of SMEs and is closely tied to operational problem-solving capabilities. Nuar et al. (2021) advocate for a computational problem-solving model for SME managers, where complex problems are decomposed into manageable sub-units, patterns are identified, and systematic solutions are developed—emphasising abstraction as a tool for focusing on relevant details. In this regard, Daft (2012) underscores the necessity for managers to possess the cognitive ability to navigate these modular problem structures effectively. Given the multifaceted challenges SMEs encounter, it is imperative for managers to be equipped with robust problem-solving skills to address obstacles efficiently. The integration of advanced technologies, as noted by

Péntek and Kovacs (2025), not only alleviates employee dissatisfaction but also enhances productivity—outcomes that hinge on managerial competence in implementing and managing change. Furthermore, as part of strategic planning and administrative responsibilities, managers must be adept at interpreting business data to detect issues, diagnose root causes, and implement appropriate solutions (Chikwe & Biriowu, 2019). Ultimately, problem-solving competence empowers managers to think critically, act proactively, and resolve challenges effectively, thereby promoting the sustained performance and operational coherence of SMEs.

Managerial Implication 2: Developing Effective Leadership Competence

The study measured effective leadership through the process of - (1) furthering a positive work environment, (2) empowering employees, and (3) promoting innovation. This is consistent with the literature, which emphasises that effective leadership extends beyond task supervision to include creating supportive climates, enabling employee autonomy, and encouraging creativity and continuous improvement (Boyatzis, 2008; Northouse, 2016; Salas et al., 2015). To institute a positive work environment, the leader-member exchange (LMX) theory suggests that effective leadership is contingent on effective leader-member interactions through commitment mutual respect, and trust (Blanc & González-Romá, 2012; Graen & Uhl-Bien, 1995). Again, effective leadership is linked to how a leader is able to harness motivational patterns to encourage the workforce to take up tasks voluntarily (Northouse, 2019). Effective leadership is expensive (Burns, 1978); hence the SME manager must ensure the appropriate utilisation of resources. Empowering employees is one of the aspects of charismatic leadership (Northouse, 2019), where leaders encourage followers to work towards achieving the goals of the organisation.

Empowerment enhances leadership transparency as followers are given access to the information that can improve their performance. Motivational and inspiring leadership is linked to employees' empowerment (Kotter, 1990). Another aspect of effective leadership studied is

the promotion of innovation within the organisation. Here, the drive is to sustain organisational competitive advantage (Hitt et al., 2007). Hence, it is important that SME managers provide avenues for the deployment of innovative ideas in line with current industry trends. To achieve this, SME managers must promote the adoption of innovation strategies, ensuring that innovative ideas are always evaluated based on their merit, with a focus on problem-solving to improve productivity and growth.

Consequently, to develop effective leadership competence, the SME owner/manager: First, must provide a positive work environment by building strong relationships with employees based on mutual respect, trust, and commitment, which promotes positive interactions and a supportive workplace culture; for instance, regular employee-manager meetings can enhance trust and communication. Motivate employees by harnessing motivational patterns, offering meaningful incentives, setting clear goals, and recognising achievements to boost engagement and encourage voluntary task participation. Additionally, effective leadership requires strategic resource management, including careful planning and allocation to support team and organisational goals while minimising waste.

Second, empower employees by adopting a charismatic leadership approach through inspiring employees with enthusiasm and a clear vision, creating a sense of shared purpose and commitment to organisational goals. Promote transparency by openly sharing information, such as updates on company strategies and performance metrics, to help employees enhance their contributions. Encourage autonomy by empowering employees to make decisions within their areas of expertise, which builds confidence, trust, and a strong sense of ownership and responsibility.

Third, promote innovation by encouraging creativity and problem-solving in a workplace environment where employees feel safe to share innovative ideas without fear of judgment, utilising brainstorming sessions and structured systems to evaluate and implement

these ideas. Stay aligned with industry trends by regularly adopting strategies that incorporate new developments to ensure the organisation remains competitive and relevant. The manager must evaluate ideas based on merit through fair and transparent processes, prioritising their potential to solve problems, enhance productivity, and drive growth.

Therefore, effective leadership within SMEs hinges on creating a positive work environment, empowering employees, and fostering innovation. Building strong relationships based on trust and mutual respect, as highlighted by the LMX theory, establishes a foundation for a supportive and collaborative culture. Motivating employees through clear goals, recognition, and strategic resource management ensures engagement and productivity. Empowering employees involves adopting a charismatic leadership approach that fosters a sense of ownership and responsibility, while promoting transparency and autonomy to strengthen team morale. Moreover, encouraging innovation is vital for maintaining a competitive edge. In providing a safe space for creative ideas and aligning strategies with industry trends, SME managers can sustain growth and adaptability. Ultimately, these leadership practices—when effectively implemented—create a dynamic and thriving organisation, positioning it to achieve both immediate goals and long-term success. Through proactive thoughtful leadership, SME managers can inspire their teams to reach their full potential, ensuring the organisation remains innovative, efficient, and competitive in a rapidly changing business landscape.

Following the emphasis on effective leadership competence in enhancing managerial effectiveness and team cohesion presented in Chapter 2, its critical importance as revealed in this study, is further substantiated by extensive scholarly insights. Effective leadership is a key managerial competence for SME owners, enabling them to foster innovation and instil a sense of ownership among employees. Transformational and democratic leadership styles—marked by shared vision, collaboration, and empowerment—have been shown to drive creativity,

initiative, and sustained employee commitment (Northouse, 2019; Qalati et al., 2022). These styles promote active engagement and innovative thinking, which are essential for SMEs navigating dynamic environments. In contrast, autocratic and transactional approaches often hinder initiative and reduce employee agency (Feranita et al., 2020). Strong leadership also enhances communication, morale, and accountability, aligning employee efforts with organisational goals and encouraging personal responsibility for outcomes (Graen & Uhl-Bien, 1995; Sangka et al., 2019). Thus, effective leadership functions not only as a managerial behaviour but as a strategic enabler of innovation and ownership among employees in SMEs.

Managerial Implication 3: Developing Efficient Decision Competence

Efficient decision-making was measured in the current study as (1) making timely and informed decisions, (2) considering various perspectives, and (3) taking calculated risks. Decision-making is a strategic management process that enables strategic competitiveness for top-quartile returns (Hitt et al., 2007). The findings confirm that this competency is a significant component of the overall managerial competence construct, which has a powerful direct effect on managerial effectiveness ($\beta=0.48$, $p=0.00$) and serves as the primary antecedent for building both task cohesion ($\beta=0.81$, $p=0.00$) and social cohesion (0.84 ; $p=0.00$).

The timeliness of decision-making sets a target for implementation to enhance returns on investment. SME managers must recognise the importance of timely decision-making when faced with business uncertainty and turbulence, especially in an economy like Nigeria, with an unsteady inflation rate and currency devaluation. For instance, Punch Newspaper reports that about 24 firms left Nigeria from 2020 to 2024 due to the uncertainty surrounding business growth, including currency instability, economic challenges and regulatory hurdles (Sobowale, 2024). Therefore, SME managers need to take critical decisions to navigate through business uncertainties.

This is strongly supported by the literature review. The call for data-driven decision-making in SMEs (Quansah et al., 2022; Sucu, 2020) aligns with the "informed" dimension, while the finding that participatory decision-making promotes creativity (Guo & Wang, 2017) directly connects to "considering various perspectives." Furthermore, the need for strategic foresight and adaptability in navigating crises, as highlighted in your review of SME survival literature, is operationalized through this competency. The example from Punch Newspaper (Sobowale, 2024) concerning firms exiting Nigeria crystallizes the devastating cost of decision-making failure in the face of volatility.

From the SME survival angle, Kottika et al. (2020) indicated that the entrepreneurs who navigated the Greek crisis succeeded by making timely decisions that focused on key actions by considering various perspectives of the business such as strategic downsizing, financial management, extroversion, and targeted marketing to adapt and create value in a shifting environment. Again, the literature (Kottika et al., 2020) equally emphasises that taking calculated risks can boost performance, especially when there is the struggle to survive. This is corroborated by the literature (Hitt et al., 2007), that decision-making often involves taking intelligent risks. Hence, efficient decision-making is at the heart of SME business growth enabling managers to make timely and informed decisions, consider various perspectives that can enhance survival, and take calculated risks to ensure implementation.

Consequently, to develop efficient decision-making competence SME managers/owners can focus on the three core areas investigated in this study as follows. First, making timely and informed decisions is essential to SME survival, particularly during periods of uncertainty and turbulence. SME managers must prioritise setting clear targets for decision implementation to maximise returns on investment. In volatile economies like Nigeria, where inflation and currency instability present significant challenges, leveraging diverse information sources ensures that decisions are well-informed. Delaying decisions in such dynamic

environments can result in missed opportunities, as demonstrated by the exit of 24 firms from Nigeria between 2020 and 2024, underscoring the importance of prompt and strategic action.

Second, considering various perspectives is vital for effective decision-making, requiring SME managers to analyse multiple dimensions of their business. This includes strategic downsizing to reduce costs while maintaining efficiency, financial management to ensure liquidity and sustainable cash flow, extroversion strategies to explore external markets and diversify risk, and targeted marketing to align with evolving customer needs. Drawing learned lessons from Greek entrepreneurs who navigated crises by integrating these approaches, SME managers can adapt to challenges, create value, and position their businesses for long-term survival and growth.

Third, taking calculated risks is essential for nurturing innovation and adaptability in decision-making processes. By carefully evaluating the potential benefits and downsides of decisions, businesses can make informed choices that enhance performance and resilience. Intelligent risk-taking allows organisations to seize opportunities and remain competitive, especially in uncertain economic landscapes. Recognising that calculated risks are essential for survival and growth ensures a proactive approach to challenges, positioning businesses to adapt and thrive in dynamic environments.

As a managerial implication, Efficient decision-making is crucial for SME survival and growth, particularly in volatile economies. This study highlights three key aspects: making timely and informed decisions, considering various perspectives, and taking calculated risks. Timely decisions are essential, as delays can result in missed opportunities, especially in uncertain environments like Nigeria, where economic instability and inflation affect businesses. The exit of 24 firms from Nigeria between 2020 and 2024 underscores the need for prompt action to navigate such challenges.

Considering multiple perspectives is equally vital. SME managers must evaluate different aspects of their business, such as financial management, cost reduction, and market expansion, to adapt to changing conditions. The experience of Greek entrepreneurs during the crisis shows that businesses that embraced diverse strategies like strategic downsizing and targeted marketing were able to survive and thrive.

Finally, taking calculated risks plays a key role in fostering innovation and maintaining competitiveness. The careful assessment of potential outcomes, can enable SME businesses can make decisions that contribute to long-term success. Risk-taking is essential for identifying growth opportunities and adapting to new market dynamics. In conclusion, SMEs can enhance decision-making by focusing on these three core areas, positioning themselves for sustained growth and resilience in a rapidly changing business environment.

Following the emphasis on efficient decision-making as a core managerial competence in enhancing managerial effectiveness and team cohesion presented in Chapter 2, its significance is further reinforced by scholarly perspectives. Decision-making is central to a manager's role, involving the identification of problems and opportunities and determining appropriate courses of action (Daft, 2012). In SMEs, where resource constraints and rapid responses are common, effective decision-making is particularly vital. Competent managers possess the analytical skills and knowledge to evaluate situations, assess risks, and select strategies that align with organisational goals (Fotouhi & Khojasteh, 2021; GarcíaPérez et al., 2013). The quality of decisions depends on both managerial skill and the availability of timely, relevant information, which significantly shapes SME outcomes. Ali et al. (2017) and Daft and Marcic (2017) emphasise that good decisions underpin effective resource allocation, challenge resolution, and strategic goal attainment. Moreover, decision-making in SMEs is often expedited due to the dual role of the owner as both leader and manager, allowing for faster, more agile responses (Pilar et al., 2018). Thus, efficient decision-making is not merely a routine

task but a strategic competence that drives growth, resilience, and long-term sustainability in SMEs.

Managerial Implication 4: Developing Competence in Resource Optimisation

This dimension of managerial competence was measured as maximising the utilisation of resources, including human capital, technology, and financial assets. This strategic orientation directly operationalizes the resource optimisation competency measured in your study. It aligns with the path where Managerial Competence significantly influences Managerial Effectiveness ($\beta=0.48$, $p=0.00$). Competent resource stewardship—through prudent financial diversification and human capital development—strengthens the organization's adaptive capacity, a foundation for sustained effectiveness. This focus is strongly supported by prior research in the SME context. The literature review highlights that cost reduction was key to SME survival during Greece's economic crisis (Kottika et al., 2020), and resource optimisation is critical to organizational growth (Liang et al., 2021). The proposed strategy extends beyond mere cost-cutting to proactive asset growth and capability building.

Given the inherent limitations in funding and operational capacity, the optimal administration of limited resources is crucial for SMEs, not only to minimise waste but also to enhance overall productivity (Bakare et al., 2024). Strategic resource allocation becomes especially critical during economic downturns when inefficiencies can threaten business continuity. Recent research also links effective resource management in SMEs to digital literacy—a competency that enables more efficient use of modern tools and platforms for streamlining operations (Sualeh et al., 2024). However, a persistent barrier remains: many SMEs are slow to adopt emerging technologies due to their perceived complexity and the lack of internal capacity to implement them effectively (Low et al., 2016). The adoption of technological further underscores the need for targeted training and capacity-building

initiatives that equip SME leaders and employees with the digital skills necessary to navigate and thrive in an increasingly digital economy.

The efficiency of any organisation is dependent on the resources utilised to achieve the goals of the organisation (Daft, 2008). For human capital resources, the SME manager must provide empowerment, support and belonging. The survival and long-term growth of SMEs in challenging economic conditions rely on the careful management of limited resources, effective entrepreneurial leadership, and the capacity to adapt through innovation and digital transformation. Insights from prolonged economic downturns (Kottika et al., 2020), highlight that resilience is shaped not only by external factors but, more importantly, by internal strengths—such as the vision of business owners, the competencies of employees, and the flexibility of organisational structures. Thus, the cultivation of a culture of adaptability, strengthening digital capabilities, and maintaining operational efficiency, can enable SMEs to be better positioned to navigate economic uncertainty and build a more sustainable and competitive future.

To boost performance, entrepreneurs in Greek SMEs had to reallocate resources where needed (Kottika et al., 2020). Thus, the workforce in the organisation can be downsized to reduce salaries and other allowances, retaining only those employees essential for growth and productivity. Hence, the manager needs to have the ability to recognise the strengths and weaknesses of each employee (Kottika et al., 2020). Whereas some employees in SMEs are near relatives and friends of the owner (Agwu & Emeti, 2014), which makes it difficult to lay off employees during crisis, the drive for sustainability should be of utmost interest to all stakeholders. The adoption of technology should be linked to the competitiveness of the organisation. Although some SMEs rarely adopt recent technologies because of their complexity (Low et al., 2016), a balanced assessment of the need for growth can favour the adoption of new technologies.

For instance, the use of manual methods, such as Microsoft Excel, in managing organisational data has been seen to cause delays, inefficiencies and inaccuracies (Karumanchi, 2017), which calls for the need to utilise modern database systems. The cost of training employees to use new technologies should be factored into the cost of production yearly to enhance adaptability. Organisations invest in financial assets such as cash savings in the bank, mutual funds, stocks, etc., to sustain future financial crises. When cash flow exceeds the amount needed for operations, it is suggested that the organisation invest in high-yielding businesses through diversification (Hitt et al., 2007).

Thus, an SME manager can develop resource optimisation competence through the following avenues. First, to maximise resource utilisation, SME managers must prioritise effective human capital management by creating an environment that empowers and supports employees, to provides a sense of belonging and provide growth opportunities. Managers should implement performance-driven reallocation, identifying and realigning human resources based on organisational needs and individual contributions, which may include downsizing during crises while retaining essential employees to enhance efficiency and cut costs. Recognising employee strengths and weaknesses is vital for aligning roles with capabilities, thereby boosting productivity and eliminating redundancies. Additionally, in cases where employees are family or friends of the owner, managers must navigate these relationships carefully, ensuring sustainability remains a top priority despite potential challenges.

Second, the adoption of technology is essential for maintaining competitiveness and operational efficiency in SMEs. Managers should evaluate the growth objectives of the organisation to determine the necessity of new technologies, avoiding outdated methods that impede productivity. To ensure successful implementation, they must allocate annual budgets for employee training, enabling smooth adaptation to new systems and tools while enhancing

overall efficiency. Additionally, selecting user-friendly yet impactful technologies is essential, as too complex systems can discourage adoption and limit their effectiveness (Low et al., 2016).

Third, efficient financial resource management is critical for ensuring the sustainability and resilience of SMEs. Managers should diversify investments by reinvesting surplus cash flow into high-yielding opportunities, such as mutual funds or new business ventures, to prepare for potential financial crises. Incorporating financial literacy and training for key staff can improve decision-making and enhance the organisation's ability to navigate complex financial scenarios. Furthermore, regularly reviewing and aligning financial plans, investments, and savings with strategic goals ensures adequate liquidity for daily operations while promoting long-term growth and stability.

In essence, the managerial competence required for resource optimisation in SMEs is multifaceted, focusing on the strategic management of human capital, technology, and financial assets. SME managers must prioritise effective human resource management by advancing an empowering environment, reallocating resources as necessary, and ensuring alignment between employee strengths and organisational needs. Navigating family or friendship ties within the workforce adds complexity, but maintaining a focus on long-term sustainability is essential.

The adoption of modern technology is another cornerstone of operational efficiency and competitiveness. SME managers must assess the necessity of new technologies based on growth objectives, while considering ease of use to ensure smooth integration. Allocating resources for employee training is crucial for adapting to technological changes and optimising productivity.

Finally, efficient financial management, including strategic investment in high-yield opportunities and sound cash flow management, is vital for securing the organisation's future.

Managers should ensure that financial decisions align with the company's long-term goals, safeguarding against crises and fostering growth. By integrating these competencies, SME managers can enhance overall resource utilisation, thereby driving both short-term performance and long-term sustainability.

Following the emphasis on resource optimisation in enhancing managerial effectiveness and team performance presented in Chapter 2, its critical importance is reinforced by SME-specific and broader management literature. In the context of SMEs operating in Nigeria's oil and gas industry—many of which engage in project-based activities such as construction, supply of personnel, and consumables—resource optimisation is essential for effective planning and scheduling (Srinivasa Rao Allu et al., 2024). Rooted in the POLC framework, particularly the planning and organising functions, resource optimisation enables managers to allocate limited assets—personnel, capital, and materials—efficiently to meet project demands (Daft, 2012; Atanda et al., 2025). It also supports sound decision-making and problem-solving by aligning resources with organisational goals. Given the volatility in demand and supply, especially in project-driven sectors, as in the oil and gas industry, optimising the match between roles and employee competencies is necessary to prevent inefficiencies and reduce operational costs (Santos et al., 2013; Kottika et al., 2020). However, the informal nature of resource planning in many SMEs often exacerbates these challenges (Daft, 2012). Therefore, competent managers must possess the skills to anticipate needs, plan proactively, and deploy resources effectively to enhance productivity and sustain competitive performance.

Managerial Implication 5: Developing Relationship Management Competence

The current study measured this dimension as building strong relationships with employees and stakeholders, resolving conflicts, and cultivating a harmonious work

environment. In the face of improved communication technologies, organisations manage human relationships using established information systems to enhance and support the coordination of activities and projects (Daft, 2008). The current study has identified social cohesion as the second driver of team cohesion, primarily strengthened by inclusion and diversity. This provides a social-cultural perspective on SME survival. This is corroborated in a previous study that suggests that the effectiveness of project teams in the oil and gas industry in Nigeria is enhanced through a socialising process (Umuteme, 2024). Again, Chinese and Japanese firms equally support relationship management through the creation of strong harmony and social cohesion (Hitt et al., 2007). The empirical study by (Dorfman et al., 2012) suggests that managers who demonstrate collaborative skills are often preferred by employees. These literature positions provide a strong reason for relationship management.

Consequently, SME managers can develop relationship management competence by focusing on the following three critical areas. First, building strong relationships with employees and stakeholders requires the promotion of trust and collaboration through open communication and mutual respect. This is empirically substantiated by the finding that Social Cohesion—defined by dimensions including Trust and Acceptance and Effective Communication—has a significant positive influence on Managerial Effectiveness ($\beta=0.23$, $p=0.05$). Furthermore, your ranked dimensions reveal that the highest manifestation of Managerial Effectiveness is Relationship Building, characterized by active listening, empathy, and nurturing mutual trust.

This focus aligns with established team dynamics theory. Salas et al. (2015) posit that social cohesion, built on interpersonal liking and social bonds, is crucial for team performance. The findings specify that for managers, the active cultivation of these bonds is a core competency. Furthermore, Analoui et al. (2010) stress that managerial effectiveness is rooted in promoting positive relationships to enhance productivity. The data quantifies this link,

showing that a manager's competency in nurturing relationships directly strengthens the social fabric of the team, which subsequently translates into their perceived effectiveness. Thus, investing in trust-based relationship management is not merely supportive but is a strategic imperative for SME managerial success.

SME managers can enhance these relationships by leveraging improved communication technologies and established information systems to streamline the coordination of activities and projects, ensuring that all parties are aligned and working toward shared goals effectively. However, evidence in the literature (Low et al., 2016; Yuwono et al., 2024), suggests that the implementation of ICT in SMEs is often hindered by several constraints, including limited financial resources, insufficient ICT knowledge, and a general reluctance to embrace change. On these issues, the outcome of the empirical study in the literature (Yuwono et al., 2024) suggest that the education level and awareness of the benefits of ICT among owners/managers are positively correlated with the level of ICT adoption in SMEs. Another study (Radicic & Petković, 2023), suggest that the benefit of investment in ICT or digitisation of work process is dependent on the size of the firm.

Second, resolving conflicts and cultivating a harmonious work environment requires promoting inclusion and diversity as essential drivers of social cohesion, which enhances team collaboration and supports SME survival. SME managers can draw inspiration from the practices of Chinese and Japanese firms, which emphasise building harmony and encouraging strong social cohesion. For instance, recent studies highlight how cultural approaches in Chinese and Japanese companies—particularly their focus on interpersonal harmony and relationship-building—can serve as valuable models for SME managers. In the Chinese context, the cultivation of personal networks supported by mutual obligation and trust, plays a significant role in enhancing internal collaboration and employee engagement, as a win-win

positive outcome on production based on the show of genuine concern for the welfare of employees (Ameyaw et al., 2022; Li & Yu, 2024).

Meanwhile, Japanese organisations often operate on the principle of a cultural harmony and group consensus, with emphasis on humility of the leadership, which has been shown to contribute to workplace stability and effective teamwork (Shikama et al., 2024). These culturally embedded practices create a foundation of mutual respect and cohesion that can help SMEs provide a growth-driven win-win approach to social cohesion through loyalty, reduction in employee turnover, and building a greater unity-bonding teams, especially in business settings where resources are limited, like SMEs.

Third, enhancing team effectiveness through collaboration involves encouraging socialising processes within teams, as evidenced by the oil and gas industry in Nigeria, where social cohesion improves project outcomes. SME managers should also demonstrate strong collaborative skills, which are often preferred by employees and contribute to promoting stronger team dynamics, ensuring greater unity and productivity in achieving organisational objectives.

In summary, this study highlights the critical role of relationship management in enhancing team cohesion and SME success. The research underscores the importance of building trust and collaboration with employees and stakeholders, facilitated by improved communication technologies and information systems. However, challenges such as limited resources and ICT knowledge can hinder these efforts. Overcoming these obstacles, particularly through increased education and awareness, can significantly boost ICT adoption and support better organisational coordination.

The study also emphasises the value of resolving conflicts and fostering a harmonious work environment by prioritising inclusion and diversity, which strengthens social cohesion and team collaboration. Drawing inspiration from Chinese and Japanese firms, SME managers

can adopt cultural practices that encourage interpersonal harmony, trust, and mutual respect—key drivers of employee engagement and long-term success.

Finally, enhancing team effectiveness through collaboration is vital for improving organisational outcomes. The evidence from the oil and gas industry, alongside empirical studies, demonstrates that social cohesion and collaborative skills among managers are integral to achieving higher productivity and unity within teams. The need to focus on these aspects can enable SME managers to cultivate a cohesive and productive workforce, promoting growth even in resource-constrained business environments. This approach offers a sustainable path for SMEs to thrive, ensuring both organisational stability and enhanced team performance.

Therefore, based on the emphasis on relationship management as a key dimension of managerial effectiveness and team cohesion in Chapter 2, its critical role is further underscored by empirical and theoretical studies. People management has been identified as one of the most essential managerial competencies (Sangka et al., 2019), with competent SME managers expected to build and maintain productive relationships with a wide range of stakeholders, including employees, customers, suppliers, and business partners (AlQershi et al., 2020; Daft, 2012). Effective relationship management involves cultivating trust, fostering open and honest communication, and creating a collaborative environment where employees feel valued and engaged (Odonkor et al., 2024). Strong interpersonal skills—such as active listening, conflict resolution, and negotiation—are vital to this process. Beyond internal cohesion, positive external stakeholder relationships directly impact the sustainability and competitiveness of SMEs (Adiguzel, 2018). In today's digitally connected environment, leveraging communication technologies further enhances engagement and transparency across all levels. Thus, relationship management goes beyond directive leadership; it is about advancing a culture of mutual respect, collaboration, and shared commitment—key drivers of long-term success in small and medium-sized enterprises

Managerial Implication 6: Developing Adaptability and Flexibility Competence

The challenges of doing business in a dynamic environment in the 21st century require managers to develop adaptability and flexibility (Daft, 2008). Hence, this aspect of managerial competencies was measured in this study as embracing change, promoting a culture of continuous learning, and equipping employees to adapt to evolving business conditions. A previous study also suggested that the adaptability dimension of organisational culture and long-term orientation cross-culture are determining variables of project success in the oil and gas industry (Umuteme, 2024). Since Nigeria's cross-cultural dynamics suggest adaptation to long-term orientation (Hofstede, n.d.), a resilient workforce is expected in the workplace, which is advantageous to growth through the transfer of experience from older employees to new joiners as most of the employees are willing to stay till retirement age. As most organisations now employ Generation Z workforce, the literature (Laudert, 2018) suggests the need for adaptive and authentic leadership styles to promote collaboration in the workplace. Adaptive leadership involves the behaviours and actions of leaders to help others address and resolve critical changes in their lives (Northouse, 2019). The application of this leadership behaviour in SMEs sees a manager who introduces change through employees-management collaborative effort and provides psychological assistance to ensure employees are not negatively impacted by the change. Research shows that authentic leadership promotes transparent communication, enhances workforce adaptability (Men & Stacks, 2014); builds humane employee relationships (Hidayat, 2016); strengthens teams through self-correcting leadership (Lyubovnikova et al., 2017), and promotes change-oriented communication systems that positively influence employees (Alavi & Gill, 2017).

Therefore, SME managers can develop adaptability and flexibility competence by focusing on the following key strategies. First, embracing change and promoting continuous

learning requires establishing a culture where employees are encouraged to adapt and grow, equipping them to handle evolving business conditions effectively. SME managers can leverage the adaptability dimension of organisational culture, as demonstrated in industries like oil and gas, where long-term orientation and cross-cultural dynamics have been key factors in achieving project success.

Second, building upon the study's findings, nurturing a resilient and collaborative workforce is not merely an aspirational goal but a strategic imperative directly supported by the pathway to managerial effectiveness. This involves a dual strategy – (1) Facilitating Knowledge Transfer through Cultural Orientation: This practice directly builds Social Cohesion, which your findings identify as a significant mediator ($\beta=0.19$, $p=0.05$) between competence and effectiveness. By leveraging Nigerians' long-term, cross-cultural orientation to facilitate mentorship and knowledge transfer, managers actively cultivate the top-ranked dimensions of social cohesion; (2) Inclusion and Diversity and Trust and Acceptance. This creates the “psychologically safe environment” where experienced employees feel valued and newer employees feel integrated, thereby strengthening the shared values and mutual support that define a cohesive team.

Third, implementing adaptive and authentic leadership involves addressing critical changes through collaborative efforts while providing employees with psychological support to navigate transitions effectively. By practicing authentic leadership, SME managers can enhance workforce adaptability, build strong and trusting relationships, and create transparent, change-oriented communication systems that positively influence team dynamics and provide a more cohesive and adaptable organisation.

This, this study underscores the importance of adaptability and flexibility in managerial competencies, particularly within the dynamic business environment of the 21st century. In Nigerian SMEs, these competencies can be cultivated by fostering a culture of continuous

learning, supporting employees in navigating change, and facilitating the transfer of knowledge between older and newer employees. The study also emphasises the role of cross-cultural dynamics, particularly long-term orientation, in driving project success, especially in industries like oil and gas.

In addition, adaptive and authentic leadership plays a pivotal role in building a resilient and collaborative workforce. Managers who adopt these leadership styles help employees face critical transitions with psychological support, transparent communication, and collaborative efforts. By tailoring leadership approaches to the needs of a multigenerational workforce, particularly Generation Z, SME managers can create a work environment that encourages flexibility and growth.

Ultimately, this research highlights that effective leadership, which combines adaptability with authentic and collaborative practices, is essential for driving organisational success. By embracing these strategies, SME managers can nurture a work culture that not only supports employees through change but also enhances their ability to thrive in an ever-evolving business landscape. This approach offers a pathway for long-term organisational growth and employee development in a competitive and changing global market.

In supporting the emphasis on adaptability and flexibility as key factors of managerial competence in Chapter 2, their critical importance as seen in this study, is further strengthened by empirical evidence. In the face of dynamic demand-supply fluctuations and volatile market conditions, adaptability enables SME managers to sustain customer trust and operational relevance (Ali et al., 2019). As SMEs often operate in rapidly changing environments, the ability to respond swiftly and effectively is a distinct advantage over larger, more rigid organisations (Bouzari et al., 2023). Competent managers demonstrate this agility through timely decision-making, openness to innovation, and responsiveness to emerging trends (Daft, 2012). However, limited workforce competence can hinder this flexibility, restricting the

organisation's capacity to adjust operationally and strategically (Brozović et al., 2023). Adaptability is also embedded within organisational culture, where flexible practices foster continuous learning and performance (Denison et al., 2003). Therefore, for SMEs, managerial adaptability and flexibility are not only crucial for navigating uncertainty but also serve as enablers of resilience, innovation, and long-term competitiveness. This aligns with research emphasizing that social activities and supportive environments facilitate information sharing and collaborative problem-solving (Kloppenborg & Petrick, 1999; Salas et al., 2017). Furthermore, it operationalizes the principle that shared values and norms advance cohesion and shape group identity (Schein, 2010; Dinh & Salas, 2017), turning a multigenerational workforce from a potential challenge into a source of resilient strength.

Recommendation for Future Research

The evaluation of findings highlighted the centrality of problem-solving and leadership competencies in driving managerial effectiveness under the mediated influence of team cohesion. The quantitative findings establish a robust structural relationships in the model—particularly the strong mediating role of team cohesion between managerial competence and effectiveness—yet they inherently cannot capture the lived experiences and nuanced decision-making processes behind these statistical relationships. This presents a valuable opportunity for qualitative inquiry. This recommendation is directly prompted by the core outcome of the study: the identification of problem-solving and effective leadership as the two highest-ranked competencies and the demonstration of their strong indirect effects through task cohesion ($\beta=0.81$) and social cohesion ($\beta=0.84$). While the model confirms that these pathways are critical, the employee-reported data leaves the how and why unexplored. For instance, how do managers in the oil and gas sector practically “encourage creativity and collaboration” (the top-ranked problem-solving behaviour) to build cooperation? How do they “empower employees”

(a key leadership behaviour) to promote the trust and inclusion that defines social cohesion? A qualitative design is necessary to uncover these processual, context-embedded realities.

The literature review establishes that managerial competence is tied to actionable behaviours (Boyatzis, 1982, 2008) and that team cohesion is multifaceted, involving shared norms and conflict management (Salas et al., 2015; Dinh & Salas, 2017). Furthermore, the context of SMEs in the oil and gas sector is noted for its informality and labour intensity (Agwu & Emeti, 2014). Also, literature review underscores that managerial effectiveness involves “task and people management” (Analoui et al., 2010) and that competent managers must “promote a collaborative work culture” (Buchanan & Huczynski, 2017).

A qualitative study would directly address the call in the literature for deeper understanding of strategic business plans (Saah, 2022) and lean management approaches (Kottika et al., 2020) in practice. It would explore how the competencies you quantified are actually enacted within the unique regulatory, safety, and market volatilities of this sector, thus providing the industry-specific strategies and challenges. Therefore, building directly upon the outcome of this study future research should implement a qualitative phenomenological study, conducting in-depth interviews with 30-40 SME managers in the Nigerian oil and gas sector.

Similarly, while the study provided valuable insights into the relationships between managerial competence, team cohesion, and managerial effectiveness, the scope of the study was confined to the oil and gas industry in Nigeria. Expanding future research to include other industries will test the universality of these findings and can uncover new dimensions of managerial competence, managerial effectiveness and team cohesion that may be unique to other sectors. Such as SMEs in the manufacturing sector.

This second recommendation is driven by two key outcomes: (1) the strong validation of the model within a single, specific industry, and (2) the intriguing lower ranking of Adaptability and Flexibility as a managerial competence in the sample. This ranking may be

sector-dependent. In the capital-intensive, project-based oil and gas sector, core competencies like problem-solving and structured leadership might be paramount. However, your own literature suggests adaptability is crucial for navigating crises and change. Testing this model in a sector defined by rapid change, like technology, could dramatically alter this ranking and potentially reveal new moderating or mediating variables.

The literature in Chapter 2 establishes that SME success depends on strategic foresight and adaptability (as cited in your review of crisis navigation) and that creative thinking enhances problem-solving (Ndlela & Barnes, 2024). These factors may weigh differently across sectors. For instance, applying your framework to SMEs in manufacturing would test if the intense focus on process efficiency and “cost reduction” (Kottika et al., 2020) elevates the importance of Task Cohesion and competencies like Resource Optimisation. Conversely, applying it to the IT sector would test if Adaptability becomes a top-ranked competence and if Social Cohesion (for innovation) is a stronger mediator than task cohesion.

Consequently, a another critical avenue for future research is a comparative, multi-sector study replicating and extending your model across distinct SME industries (e.g., manufacturing, technology, services).

Conclusions

In the dynamic landscape of Nigeria’s oil and gas sector, the effective management of small and medium enterprises (SMEs) is essential for promoting sustainable growth and maintaining competitiveness. The complexities of this industry require SME owners to not only possess technical expertise but also develop essential managerial competencies that enhance team cohesion and overall organisational performance. This study addresses a critical gap in the existing literature by identifying the specific competencies SME owners need to navigate challenges, improve managerial effectiveness, and mitigate issues such as role conflict and ambiguity.

The conclusions of this research are structured around three primary objectives, each focusing on distinct aspects of managerial competence and its impact on SMEs in the oil and gas sector. First, the study examines the direct relationship between managerial competence and effectiveness, highlighting the key skills that drive superior performance. Next, it analysed how these competencies influence team cohesion, emphasising the importance of effective leadership and decision-making. Finally, it explored the moderating role of uncertainty management, providing insights into how environmental uncertainties affect team dynamics and managerial practices. In organising the conclusions around these objectives, the study offers a comprehensive understanding of the interplay between managerial competence, team cohesion, and managerial effectiveness and ultimately provides valuable insights for enhancing the capabilities and sustainability of SMEs in this critical industry.

Research Objective 1: This research objective is stated as follows: “Investigate the direct relationship between managerial competence and managerial effectiveness in SMEs in the Nigerian oil and gas industry, Port Harcourt.”

The study confirms the foundational premise that managerial competence is a powerful, direct determinant of managerial effectiveness ($\beta=0.48$, $p=0.00$). This quantitatively validates the central assumption that what a manager knows and can do is intrinsically linked to their success. This finding carries high practical significance for SME owners and stakeholders, underscoring that investment in developing core managerial competencies is not optional but essential for organizational performance. Theoretically, it strongly reinforces the competence-based frameworks of scholars like Boyatzis (1982, 2008) within a challenging, non-Western SME context.

The ranking of the competencies underscore the fundamental significance of problem-solving and effective leadership as the primary drivers of managerial competence. The identification of these key competencies aligns with and extends the existing literature by

emphasising their impact on team cohesion and organisational performance. Problem-solving competency, as evidenced by its high-ranking importance, reinforces the necessity for SME managers to cultivate creativity and innovation, in line with previous research suggesting that creative thinking enhances problem-solving capabilities (Ndlela & Barnes, 2024). However, the reluctance of SMEs to adopt innovative solutions due to perceived complexity (Low et al., 2016) suggests a critical gap that must be addressed through continuous investment in technology and training.

Similarly, effective leadership emerges as a crucial factor in managerial effectiveness. The study aligns with Sangka et al. (2019), who emphasise leadership as the highest-ranking competency for SME managers. By linking leadership effectiveness to a people-oriented and ethical leadership approach (Kalshoven et al., 2011; Metwally et al., 2019), this study contributes to the discourse on ethical leadership as a means of encouraging employee motivation, collaboration, and change acceptance. These insights highlight the importance of leadership styles that support teamwork and ethical business practices, ultimately promoting long-term organisational success.

Efficient decision-making is ranked as the third most critical competency, with findings supporting participatory leadership as an enabler of enhanced decision-making within SMEs. Guo and Wang (2017) emphasise that employee participation in decision-making supports creativity when psychological safety is ensured. This study further strengthens this position by demonstrating how participatory leadership approaches enhance strategic decisions, align team objectives, and improve overall managerial effectiveness.

Resource optimisation competency, identified as the fourth-ranking dimension, highlights the necessity for SME managers to optimise human, financial, and technological resources. The study aligns with prior research by Kottika et al. (2020), which links cost reduction and prudent financial management to SME survival during economic crises.

Additionally, findings reinforce that optimal labour allocation, structured human resource planning, and corporate culture enhancement are vital for long-term SME sustainability (Liang et al., 2021; Yongcai, 2010).

The fifth-ranked competency, relationship management, underscores the importance of conflict resolution, employee motivation, and stakeholder engagement. Prior literature (Kmecová, 2021) suggests that strong manager-employee relationships enhance performance incentives and job satisfaction. This study extends existing research by integrating the perspective that managers must establish shared values with employees to improve organisational cohesion (Yongcai, 2010). Relationship management is, therefore, instrumental in driving employee commitment, improving workplace harmony, and ensuring long-term business stability.

Finally, adaptability and flexibility, ranked as the sixth managerial competency, emphasise the necessity for SME managers to embrace change and establish a culture of continuous learning. The study findings align with Purnama (2024), who posits that the promotion of an innovative and flexible culture enhances adaptability in dynamic business environments. Given the rapidly evolving nature of the Nigerian oil and gas industry, this study underscores the critical need for managers to instil adaptability, facilitate learning opportunities, and cultivate resilience to navigate uncertainties.

Placing these findings within the broader theoretical and practical context, this study extends the competency-based managerial effectiveness framework by incorporating team cohesion as a mediating factor. The findings directly contribute to managerial competency theory (Boyatzis, 2008) by mapping the identified competencies to emotional intelligence (EI), social intelligence (SI), and cognitive intelligence (CI). EI relates to relationship management and effective leadership, emphasising empathy, conflict resolution, and motivation. SI aligns with teamwork and relationship-building, highlighting the role of managers in sustaining

collaboration and trust. CI is linked to analytical thinking, problem-solving, and decision-making, reinforcing the necessity for strategic and innovative approaches to managerial effectiveness.

From a corporate governance perspective, the study addresses the structural and cultural weaknesses identified in SMEs (Agwu & Emeti, 2014; Yongcai, 2010) by proposing structured leadership, task delegation, and enhanced communication strategies to mitigate governance inefficiencies. Furthermore, findings support previous research (Nwankwo & Kanyangale, 2022) emphasising the role of communication in enhancing teamwork and managerial performance. The integration conflict resolution and empathy into relationship-building, enabled this study to expand upon traditional teamwork models and provides practical insights into SME management.

The implications of this study extend beyond theoretical contributions to practical applications. SME managers can leverage these findings to refine leadership strategies, enhance decision-making processes, and implement structured resource optimisation techniques to drive sustainable business growth. The study also serves as a reference for policymakers and business consultants in designing competency-based training programs that align with the evolving demands of the Nigerian oil and gas sector.

Furthermore, the study contributes significantly to SME management literature by providing empirical evidence on the role of managerial competencies in team cohesion. The findings establish a strong link between managerial effectiveness and competency development, shedding light on the importance of structured leadership frameworks and participatory management styles. Future research should explore how industry-specific challenges influence competency rankings and examine additional mediating factors such as technological advancement, regulatory compliance, and market volatility.

Moreover, the study calls for increased investment in managerial training and development programs tailored to SME managers. The dynamic nature of the business environment, especially in the Nigerian oil and gas sector, necessitates continuous learning and professional development. Policymakers and business associations should collaborate to develop targeted capacity-building initiatives that equip SME managers with the necessary skills to navigate industry complexities and supports sustainable business practices.

In addition to practical applications, the theoretical implications of this study highlight the evolving nature of managerial competencies in response to market disruptions and economic fluctuations. The research findings suggest that traditional managerial models must be adapted to integrate emerging competencies such as digital transformation, crisis management, and sustainability leadership. These areas present opportunities for future research to investigate how digitalisation and technological advancements influence managerial effectiveness in SMEs.

Finally, this study underscores the importance of resilience and strategic agility in SME management. As SMEs continue to face increasing competition and economic uncertainties, establishing a framework for a culture of adaptability, ethical leadership, and collaborative problem-solving was critical to sustaining long-term business success. By bridging the gap between theory and practice, this research provides valuable insights that can guide SME managers, policymakers, and scholars in advancing effective management strategies within the Nigerian oil and gas industry and beyond.

In conclusion, on research objective 1, this study provides a comprehensive examination of the direct relationship between managerial competence and managerial effectiveness, emphasising the critical competencies required for SME managers to thrive in competitive and dynamic environments. By linking managerial competencies to team cohesion, corporate culture, financial prudence, and adaptability, this research contributes to

both theory and practice, offering valuable insights for business leaders, scholars, and policymakers. Future research should explore industry-specific variations in competency rankings and investigate additional mediating factors, such as technological advancement and digital transformation, to further expand the understanding of managerial effectiveness in SMEs.

Research Objective 2: This research objective is stated as follows: “Assess how team cohesion mediates the relationship between managerial competencies and effectiveness in SMEs in the Nigerian oil and gas industry, Port Harcourt.”

The research successfully identified the primary mechanism linking competence to effectiveness. Managerial competence exerts its most substantial influence by first building strong Task Cohesion ($\beta=0.81$) and Social Cohesion ($\beta=0.84$). These, in turn, are significant drivers of managerial effectiveness, confirming their full mediating roles.

The findings provide strong empirical support for the proposition that team cohesion plays a significant mediating role, with task cohesion exerting a stronger influence than social cohesion. This insights contribute meaningfully to both theoretical frameworks and practical managerial applications, reinforcing the critical role of both collaborative task and social dynamics in enhancing managerial effectiveness. This is outcome bridges the literature on managerial competence with team dynamics literature (Salas et al., 2015; Zaccaro & Klimoski, 2001), proposing and validating a model where the manager's key function is that of a social and task architect. Practically, it reveals that the most effective managers are not just individual performers but master builders of collaborative team environments.

One of the most significant findings is the dominant mediating influence of task cohesion over social cohesion. The study identifies key dimensions of task cohesion plays a vital role in enhancing managerial effectiveness. Task cohesion dimensions, including Cooperation and Collaboration, Conflict Resolution, Goal Clarity, Communication, Trust and

Support, and Role Clarity, provide a structured approach to achieving organisational objectives. The study demonstrates that Cooperation and Collaboration rank highest within task cohesion, suggesting that enhancing teamwork and shared goal-setting is essential for SME managers to optimise performance.

In addition to task cohesion, social cohesion, including Inclusion and Diversity, Trust and Acceptance, Conflict Management, Empathy and Support, Social Interaction, and Shared Values and Norms, all of which integrates interpersonal connections with a sense of belonging within teams. These dimensions emerged as factors that enhance the link between managerial competence and effectiveness, emphasising that strong managerial competencies in problem-solving and leadership should be directed toward enhancing social bonding within teams. Furthermore, the findings align with the work of Chiniara and Bentein (2018), suggesting that social distinctions can hinder cohesion and emphasising the necessity of promoting inclusion and diversity to mitigate such risks. Although social cohesion does not exert as strong a mediating effect as task cohesion, it remains a necessary component of effective team dynamics.

The study reinforces theoretical frameworks that explain the relationship between managerial competence, team cohesion, and managerial effectiveness. Social Identity Theory (Tajfel & Turner, 1979) and Social Cognitive Theory (Bandura, 1986) are particularly relevant, as they underscore the importance of group affiliation and interpersonal dynamics in shaping team cohesion. The findings suggest that managers who prioritise Inclusion and Diversity can encourage stronger team bonds, aligning with Social Identity Theory's premise that individuals derive a sense of self-esteem and belonging from group membership. Additionally, the emphasis on Cooperation and Collaboration as key elements of task cohesion supports Social Comparison Theory (Festinger, 1954), which posits that interactions among team members influence cohesion and performance.

The managerial competency theory (Boyatzis, 2008) further supports the results of this study, reinforcing the importance of teamwork and relationship-building as core competencies for effective managers. The strong correlation between managerial competence, team cohesion, and managerial effectiveness suggests that managers with high social intelligence can cultivate cohesive teams that enhance overall performance. The study also validates existing literature (Fonceca et al., 2017) on the necessity of adaptability and decision-making in crisis management, highlighting that effective managers must navigate team dynamics skilfully to maintain cohesion and drive results.

From a practical perspective, the study offers a prioritised framework for SME managers to enhance team cohesion and managerial effectiveness. The ranking of Inclusion and Diversity as the most critical factors for social cohesion provides actionable insights for organisations aiming to improve team dynamics. The findings suggest that managers should actively promote inclusive team cultures, build trust, and facilitate conflict resolution to enhance social cohesion. Similarly, the high ranking of Cooperation and Collaboration within task cohesion underscores the importance of structured teamwork initiatives, clear communication, and shared goal-setting in driving performance.

Furthermore, the study ranks four key dimensions of managerial effectiveness: (1) Relationship Building, (2) Teamwork, (3) Result-Oriented Management, and (4) Effective Task Organisation. Relationship Building emerges as the most influential factor, reinforcing the need for managers to cultivate trust, listen actively, and resolve conflicts effectively. The second-ranked dimension, Teamwork, highlights the importance of managerial guidance and collaborative leadership in achieving organisational objectives. Result-Oriented Management emphasises goal-setting and progress tracking, supporting the idea that effective managers must align team efforts with strategic objectives. Lastly, Effective Task Organisation

underscores the necessity of strong project management skills to optimise resource allocation and ensure efficient task execution.

These findings provide a structured roadmap for SME managers to refine their leadership strategies. By understanding the mediating role of team cohesion, managers can tailor their approach to developing an environment where both interpersonal relationships and task-oriented collaboration are sustained. Investing in social cohesion initiatives, such as team-building activities, mentorship programs, and diversity training, can yield substantial benefits in terms of managerial effectiveness. Simultaneously, developing task cohesion through structured performance reviews, clear communication, and role clarity ensures that teams operate efficiently and achieve organisational goals.

The results of this study provide valuable contributions to both academic research and managerial practice. The findings address the research problem by empirically demonstrating the mediating role of team cohesion in the relationship between managerial competence and effectiveness. They confirm the significance of social cohesion in shaping managerial outcomes, thereby extending the existing literature on team dynamics and SME performance. Additionally, the study's results offer a refined framework for assessing and enhancing managerial effectiveness, providing SME managers with evidence-based strategies to optimise team performance.

By ranking the key dimensions of team cohesion and managerial effectiveness, this study refines previous theoretical models and provides a structured approach for understanding the dynamics of SME leadership. The findings suggest that improving social cohesion is particularly central to the growth initiatives for SMEs, as strong interpersonal relationships contribute significantly to employee motivation, engagement, and performance. These insights build upon existing studies that emphasise the role of team cohesion in driving organisational success.

Furthermore, the study highlights the nuanced interplay between managerial competencies and team cohesion. Unlike previous research that treats managerial competence and team cohesion as separate constructs, this study integrates these elements to illustrate how they collectively enhance managerial effectiveness. By empirically validating the mediating role of team cohesion, the research fills a gap in the literature and provides a more comprehensive understanding of SME leadership dynamics.

While this study provides significant insights, future research can explore several additional dimensions to further refine the understanding of team cohesion and managerial effectiveness. First, industry-specific variations in the impact of team cohesion on managerial effectiveness could be examined. Different industries may exhibit varying levels of reliance on social and task cohesion, influencing how managerial competencies translate into effectiveness. Additionally, longitudinal studies could provide deeper insights into the long-term impact of team cohesion on organisational performance.

Another promising area for future research is the exploration of cultural differences in team cohesion and managerial effectiveness. SMEs operate in diverse cultural contexts, and understanding how cultural norms and values influence team dynamics can provide valuable insights for global SME management strategies. Moreover, integrating qualitative research methods, such as in-depth interviews and case studies, could offer a richer perspective on how managers implement team cohesion strategies in real-world scenarios.

In conclusion, on research objective 2, this research highlights the indispensable role of team cohesion, particularly social cohesion, in enhancing the impact of managerial competence on effectiveness. By emphasising Inclusion and Diversity and Cooperation and Collaboration as top-ranking factors, the study provides a structured approach to strengthening team cohesion in SMEs. The insights gained reinforce key theoretical perspectives while offering practical recommendations for managers seeking to promote cohesive, high-

performing teams. Future research could explore industry-specific variations in the impact of team cohesion on managerial effectiveness, further refining the applicability of these findings across different organisational contexts. Ultimately, this study contributes to a deeper understanding of the intricate interplay between managerial competencies, team cohesion, and overall effectiveness in SMEs, offering a foundation for both theoretical advancements and practical improvements in team leadership and organisational performance.

Consequently, managerial training must be redesigned to focus on cohesion-building skills. Training modules should explicitly teach how to foster goal clarity, cooperative norms, inclusive trust, and constructive conflict management—directly translating the study's validated model into a curriculum.

Research Objective 3: This research objective is stated as follows: “Evaluate how role ambiguity and role conflict moderate the relationship between managerial effectiveness and team cohesion in SMEs in the Nigerian oil and gas industry, Port Harcourt.”

This study set out to investigate the moderating effect of role ambiguity and role conflict on the direct relationship between managerial competence and team cohesion using Structural Equation Modeling (SEM). To evaluate how role ambiguity and role conflict moderate the relationship between managerial effectiveness and team cohesion in oil and gas SMEs, the outcome of Hypothesis 8 to 11, shows that Role conflict and Role ambiguity does not moderate team cohesion when team members are highly educated and experienced.

A pivotal finding was that role ambiguity and role conflict did not significantly moderate the relationship between team cohesion and effectiveness. This suggests that in the studied context, cohesive teams possess a resilience that buffers against these common workplace stressors. Instead, the study emphasises the role of problem-solving skills, effective leadership, relationship building, diversity and inclusion, and cooperation and collaboration in sustaining positive managerial effectiveness and team cohesion. The demographic analysis

reveals that educational background plays a crucial role in uncertainty management, further influencing the non-significant moderation effect of role ambiguity and role conflict. These findings have several implications for theory, prior research, and practice, reinforcing the significance of a cohesive and well-managed work environment in the oil and gas sector.

The results suggest that role ambiguity and role conflict have a weak, non-significant impact on the relationship between managerial competence and team cohesion. Specifically, the path coefficient of the moderating effect of role ambiguity on task cohesion was 0.010 at a p-value of 0.384, while the moderating effect of role conflict on social cohesion yielded a path coefficient of 0.001 at a p-value of 0.918. These weak moderation effects indicate that role ambiguity and role conflict do not significantly alter the strength of the direct relationship between managerial competence and team cohesion.

This finding challenges straightforward contingency theories and offers a novel contribution: it positions team cohesion not only as a performance enhancer but also as a potential resiliency factor. It suggests that in informal, high-pressure SME environments like the oil and gas sector, the social and task bonds within a team can mitigate the negative impacts of uncertainty. This extends the work on uncertainty management (Brashers, 2001; Maden-Eyiusta, 2021) into the domain of team processes.

From a theoretical perspective, this finding aligns with literature suggesting that strong leadership, effective communication, and structured organisational processes can mitigate the adverse effects of role ambiguity and conflict. Prior research (Maden-Eyiusta, 2021) has highlighted that role ambiguity negatively affects innovation, but this study finds that effective leadership can buffer against such negative influences. By emphasising problem-solving skills and relationship building, managerial competence can counteract the negative consequences of uncertainty, thus ensuring that team cohesion remains intact even in uncertain environments.

Additionally, the ranking of managerial competence dimensions underscores the significance of problem-solving, effective leadership, and relationship building in maintaining team cohesion. Relationship building, the highest-ranked dimension of managerial effectiveness, supports the idea that strong interpersonal connections within a team can encourage collaboration and shared vision, which are critical in high-pressure industries like oil and gas. This aligns with existing research that positions social cohesion as a key determinant of team performance and workplace satisfaction.

Moreover, this study expands the understanding of team cohesion by illustrating how educational background plays a role in uncertainty management. Employees with higher educational attainment tend to possess advanced problem-solving skills and resilience, which reduce their susceptibility to role ambiguity and conflict. These findings highlight the importance of educational qualifications and continuous learning in enhancing team cohesion and managerial competence.

The findings carry several practical implications for organisations, particularly in high-stakes industries such as oil and gas, where role ambiguity and role conflict are prevalent. The non-significant moderation effect of role ambiguity and role conflict suggests that organisations should prioritise leadership development, communication strategies, and teamwork-oriented initiatives rather than focusing solely on reducing role ambiguity and conflict. In environments where effective leadership, problem-solving skills, and collaboration are emphasised, the negative effects of uncertainty management factors such as role ambiguity and role conflict can be minimised.

To enhance managerial effectiveness and team cohesion, organisations should: (i) The study highlights that effective leadership plays a critical role in mitigating uncertainty. Organisations should invest in leadership training programs that equip managers with problem-solving skills and relationship-building techniques. (ii) Given that diversity and inclusion were

identified as top-ranking factors in social cohesion, encouraging a diverse and inclusive work environment can enhance team cohesion, reducing the impact of role ambiguity and conflict. (ii) Task cohesion was primarily driven by cooperation and collaboration. Establishing clear goals, promoting teamwork, and encouraging open communication can enhance organisational effectiveness. (iv) Since educational background was a key factor influencing the findings, providing continuous learning opportunities can improve employees' ability to manage uncertainty, thereby reducing the impact of role ambiguity and conflict. (v) Although role ambiguity and conflict did not significantly moderate team cohesion, they still present potential challenges. Organisations should implement clear job descriptions, role expectations, and feedback mechanisms to further enhance clarity. (vi) Implementing digital collaboration tools can enhance transparency, streamline communication, and reduce the likelihood of role ambiguity and conflict in team settings. (vii) Organisations should establish structured conflict resolution mechanisms that allow employees to address uncertainties and conflicts in a constructive manner, thereby ensuring minimal disruption to team cohesion.

Consequently, this findings of this study demonstrates that in a work environment characterised by strong managerial competence in problem-solving skills and effective leadership, the moderating effects of role ambiguity and conflict are diminished. This finding expands the discourse on team cohesion by emphasising the role of managerial competence and workplace culture in mitigating uncertainty management factors.

Furthermore, this study reinforces the idea that diversity and inclusion play a pivotal role in social cohesion, suggesting that advancing a culture of inclusivity can counteract the adverse effects of workplace uncertainty. The findings align with previous studies that emphasise the importance of strong leadership and teamwork in organisational effectiveness (Maden-Eyiusta, 2021), but also introduce a new perspective by demonstrating that uncertainty management factors may have less impact when key managerial competencies are in place.

The significance of this study lies in its practical implications for managerial training and organisational policy. By providing empirical evidence that strong managerial competence can counteract the potential negative effects of role ambiguity and role conflict, the study offers valuable insights for organisations aiming to enhance team cohesion and overall performance. This is particularly relevant for industries where uncertainty is a common challenge, such as oil and gas.

While this study provides critical insights, future research can build upon these findings in several ways: (i) Since this study focuses on the oil and gas sector, future studies could examine whether the findings hold in other industries with different organisational structures and work environments; and (ii) A longitudinal qualitative approach could provide deeper insights into how role ambiguity and conflict evolve over time and their long-term effects on team cohesion.

In conclusion, on research objective 3, this study provides a nuanced understanding of the relationship between managerial competence and team cohesion, revealing that role ambiguity and role conflict do not significantly moderate this relationship. Instead, effective leadership, problem-solving, relationship building, diversity and inclusion, and cooperation and collaboration are key determinants of team cohesion and managerial effectiveness. SME organisations should leverage these insights to enhance leadership development, promote inclusivity, and strengthen teamwork, ensuring sustained effectiveness even in the face of uncertainty. Future research can build on these findings to further refine our understanding of team dynamics and managerial effectiveness in SME organisational contexts.

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APPENDICES

Appendix A: UREC REAF Approvals



UREC Decision, Version 2.0

Unicaf University Research Ethics Committee Decision	
Student's Name:	Adokiye Obele Umuteme
Student's ID #:	R2004D10760161
Supervisor's Name:	Dr Ilias Vlachos
Program of Study:	UUZ: PhD Doctorate of Philosophy
Offer ID /Group ID:	O33823G35901
Dissertation Stage:	1
Research Project Title:	The Impact of Managerial Competence on Team Cohesion and Managerial Effectiveness in Small and Medium Enterprises in the Nigerian Oil and Gas Industry
Comments:	No comments
Decision*:	A. Provisionally approved without revision or comments
Date:	04-Aug-2022

*Provisional approval provided at the Dissertation Stage 1, whereas the final approval is provided at the Dissertation stage 3. The student is allowed to proceed to data collection following the final approval.

Unicaf University Research Ethics Committee Decision

Student's Name: Adokiye Obele Umuteme
Student's ID #: R2004D10760161
Supervisor's Name: Dr Ilias Vlachos
Program of Study: UU-DOC-900-3-ZM
OfferID / GroupID: O72457G79841
Dissertation stage: DS3
Research Project Title: The Impact of Managerial Competence on Team Cohesion and Managerial Effectiveness in Small and Medium Enterprises in the Nigerian Oil and Gas Industry
Ethical conditions for approval: No comments.

Methodological recommendations:

Decision*: A. Approved without revision or comments

Date: 06/13/2024

All Doctoral students are advised to check the regulations pertaining to research and General Data Protection Regulation (GDPR) of the country in which the research will take place as each country may have different restrictions on conducting research.
i. Approval from a local Research Ethics Committee (REC) or professional regulatory body such as Institutional Review Board (IRB)
ii. Approval from Ministry or public agency

*Provisional approval provided at the Dissertation Stage 1, whereas the **final** approval is provided at the Dissertation stage 3. The student is allowed to proceed to data collection following the final approval.

Appendix B: REAF Form



REAF_DS - Version 3.3 AP

UNICAF UNIVERSITY RESEARCH ETHICS APPLICATION FORM DOCTORAL STUDIES	UREC USE ONLY: Application No: _____ Date Received: _____
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Student's Name: Umuteme, Adokiye Obele

Student's E-mail Address: adokiye.umuteme@gmail.com

Student's ID #: R2004D10760161

Supervisor's Name: Dr. Ilias Vlachos

University Campus/Program: Unicaf University Zambia: PhD Doctorate of Philosophy ▼

Research Project Title: The Impact of Managerial Competence on Team Cohesion and Managerial Effectiveness in Small and Medium Enterprises in the Nigerian Oil and Gas Industry

1. Please state the timelines involved in the proposed research project:

Estimated Start Date: 16-Nov-2020

Estimated End Date: 30-Jun-2025

2. External Research Funding (if applicable):

2.a. Do you have any external funding for your research?

YES NO

If YES, please answer questions **2b** and **2c**.

2.b. List any external (third party) sources of funding you plan to utilise for your project. You need to include full details on the source of funds (e.g. state, private or individual sponsor), any prior / existing or future relationships between the funding body / sponsor and any of the principal investigator(s) or co-investigator(s) or student researcher(s), status and timeline of the application and any conditions attached.

NA

2.c. If there are any perceived ethical issues or potential conflicts of interest arising from applying for and/or receiving external funding for the proposed research then these need to be fully disclosed below and also further elaborated on, in the relevant sections on ethical considerations later on in this form.

NA

3. The research project

3.a. Project Summary:

In this section fully describe the purpose and underlying rationale for the proposed research project. Ensure that you pose the research questions to be examined, state the hypotheses, and discuss the expected results of your research and their potential.

It is important in your description to use plain language so it can be understood by all members of the UREC, especially those who are not necessarily experts in the particular discipline. To that effect ensure that you fully explain/define any technical terms or discipline-specific terminology (use the space provided in the box).

The purpose of this study is to provide further insight into the direct causal effect of managerial competence (latent variable 1) on managerial effectiveness (latent variable 2) and team cohesion (latent variable 3) in SMEs, with a moderation effects of uncertainty management (latent variable 4) on the link between team cohesion and managerial effectiveness. The guiding frameworks are defined by the theories defining the key concepts of this study, including: Managerial competence, Managerial Effectiveness, Team cohesion and Uncertainty Management. The study is conducted in the Nigerian oil and gas industry, and provide answers to the following questions: RQ1: What are the Managerial Competences influencing Managerial Effectiveness in SMEs in the oil and gas industry in Nigeria from the perspective of Team Cohesion? RQ2: How does the mediating influence of Team Cohesion affect the relationship between Managerial Competences and Managerial Effectiveness; RQ3: How does the moderating role of Role Ambiguity and Role Conflict influence the direct relationship between Team Cohesion and Managerial Effectiveness

These three fundamental research questions are intricately linked to the hypotheses formulated for this research, as outlined below.

H1: Managerial competence positively and significantly influence managerial effectiveness; H2: Managerial competence positively and significantly influence task cohesion in teamwork; H3: Managerial competence positively and significantly influence social cohesion in teamwork; H4: Managerial effectiveness is positively and significantly influenced by task cohesion in teamwork; H5: Managerial effectiveness is positively and significantly influenced by social cohesion in teamwork; H6: A significant positive mediating effect of task cohesion on the direct relationship exist between managerial competence and managerial effectiveness; H7: A significant positive mediating effect of social cohesion on the direct relationship exist between managerial competence and managerial effectiveness; H8: A positive moderating effect of role ambiguity on the relationship exist between SC in teamwork and ME; H9: A positive moderating effect of role ambiguity on the relationship exist between TC in teamwork and ME; H10: A positive moderating effect of role conflict on the relationship exist between SC in teamwork and ME; and H11: A positive moderating effect of role conflict on the relationship between exist TC in teamwork and ME.

3.b. Significance of the Proposed Research Study and Potential Benefits:

Outline the potential significance and/or benefits of the research (use the space provided in the box).

The study recognizes a gap in the literature concerning the direct causal effects of managerial competence on both managerial effectiveness and team cohesion in SMEs. Its significance lies in contributing valuable insights to the existing body of knowledge, filling gaps, and advancing understanding in this field. The primary focus is to identify and comprehend the essential managerial competences necessary for SME survival beyond the crucial five-year threshold.

Additionally, the research highlights the existing gap in policies, where low-interest loans are available, but there is a lack of regulations regarding the competence of SME owners/managers for accessing funds. The significance lies in providing insights that can influence the formulation of policies linking managerial competence to government funding, potentially enhancing SME sustainability. Current policies primarily concentrate on financial support without considering the pivotal aspect of managerial competence. The research seeks to contribute to more comprehensive policies by establishing a clear connection between managerial competence and access to funding. This aims to ensure that competent managers gain increased access to financial support, addressing a critical aspect often overlooked in existing frameworks.

4. Project execution:

4.a. The following study is an:

- experimental study (primary research)
- desktop study (secondary research)
- desktop study using existing databases involving information of human/animal subjects
- Other

If you have chosen 'Other' please Explain:

4.b. Methods. The following study will involve:

- a Quantitative methodology
 a Qualitative methodology
 a mixed methods approach

If you have chosen mixed methods please state below whether you are going to proceed with triangulation or not.

- YES NO

4.c. Please state below which tools you are going to use:

A Select the tools to be used in your study	B Select how the tools selected in column A will be administered (select one or more)	C Select what types of questions will be included in the tools previously selected in column A (select one or more)
Interviews <input type="checkbox"/>	<input type="checkbox"/> Face-to-face <input type="checkbox"/> Online with camera (synchronous live discussion with camera) <input type="checkbox"/> Audio only (synchronous live discussion without camera, i.e., via phone)	<input type="checkbox"/> Open-ended questions <input type="checkbox"/> Close-ended questions <input type="checkbox"/> Includes section related to demographics
Focus Groups <input type="checkbox"/>	<input type="checkbox"/> Face-to-face <input type="checkbox"/> Online with camera (synchronous live discussion with camera) <input type="checkbox"/> Audio only (synchronous live discussion without camera, i.e., via phone)	<input type="checkbox"/> Open-ended questions <input type="checkbox"/> Close-ended questions <input type="checkbox"/> Includes section related to demographics
Questionnaire <input checked="" type="checkbox"/>	<input type="checkbox"/> Face-to-face self – administered questionnaire <input type="checkbox"/> Online, i.e., via phone or any other platform. The researcher reads the questions to the participants <input checked="" type="checkbox"/> Online asynchronous self-administered questionnaire (i.e., via email)	<input type="checkbox"/> Open-ended questions <input checked="" type="checkbox"/> Close-ended questions <input checked="" type="checkbox"/> Includes section related to demographics

A Select the tools to be used in your study	B Select how the tools selected in column A will be administered (select one or more)	C Select what types of questions will be included in the tools previously selected in column A (select one or more)
Experiments <input type="checkbox"/>	<input type="checkbox"/> Face-to-face <input type="checkbox"/> Online with camera (synchronous live discussion with camera) <input type="checkbox"/> Audio only (synchronous live discussion without camera, i.e., via phone) <input type="checkbox"/> Asynchronously via any online platform	<input type="checkbox"/> Open-ended questions <input type="checkbox"/> Close-ended questions <input type="checkbox"/> Includes section related to demographics
Tests <input type="checkbox"/>	<input type="checkbox"/> Face-to-face <input type="checkbox"/> Online with camera (synchronous live discussion with camera) <input type="checkbox"/> Audio only (synchronous live discussion without camera, i.e., via phone) <input type="checkbox"/> Asynchronously via any online platform	Provide a brief description of the test in the box 'Other' below.
Other	The questionnaires will be administered by the researcher through blind sele	

5. Participants:

5 a. Does the Project involve the recruitment and participation of additional persons other than the researcher(s) themselves?

YES If YES, please complete all following sections.

NO If NO, please directly proceed to Question 7.

5 b. Relevant Details of the Participants of the Proposed Research

State the number of participants you plan to recruit, and explain in the box below how the total number was calculated.

Number of participants

In studies involving structural equation modelling, 160 to 300 datasets have been suggested in the literature (Memon et al., 2020). For this study, the moderator combines the 10 variables of uncertainty management times 12 variables of team cohesion to arrive at a maximum of 120 factors. The sample size of 374 was then estimated using G*Power software, with the effect size of 0.15, alpha level of 0.05 and statistical power of 0.8; A pilot study will be conducted to determine the reliability of the instrument, and the final

Describe important characteristics such as: demographics (e.g. age, gender, location, affiliation, level of fitness, intellectual ability etc). It is also important that you specify any inclusion and exclusion criteria that will be applied (e.g. eligibility criteria for participants).

Age range From To

Gender Female
 Male

Eligibility Criteria:

- Inclusion criteria
- Exclusion criteria

Disabilities/Disorders: You should only include the participants who can provide informed consent for themselves. Individuals who have a mental disability and are not in a position to provide their own consent should not participate in the study. Please provide information for any other disabilities/disorders the participants may have:

Other relevant information (use the space provided in the box):

5 c. Participation & Research setting:

Clearly describe which group of participants (described in 5b) is completing/participating in the material(s)/tool(s) described in 4c above (use the space provided in the box)

Participants for this study are selected from 10 SME contractors in the Nigerian oil and gas industry, specializing in technical and environmental capabilities. The specific population size of each organization is unknown; however, the criterion for SMEs with 10 to 250 staff members is used as the basis for determining the sample size. The sample is consist of individuals with diverse professions such as engineers, nurses, legal staff, accountants, business planners, cooks, and others. All participants will complete the questionnaire.

5 d. Recruitment Process for Human Research Participants:

Clearly describe how the potential participants will be identified, approached and recruited (use the space provided in the box).

This study aims to recruit 374 workers using blind sampling facilitated by gatekeepers, owing to the inclusion criteria and the challenges associated with accessing the precise population of SME employees in the industry. Participants will be briefed by the gatekeepers in accordance with the ethical standards outlined by UREC (University Research Ethics Committee). The research will take place in Port Harcourt, a city where SME activities in the oil and gas industry are prevalent in Nigeria. The recruitment of participants will adhere to the ethical codes and procedures established by UNICAF University. The gatekeeper's letter will be used to optioned access to the contacts of potential participants from the contractor managing the projects. Access to potential participants will be through email. Access to the participants will be requested from the gatekeepers for the purpose of briefing before the study.

5 e. Research Participants Informed Consent.

Select below which categories of participants will participate in the study. Complete the relevant Informed Consent form and submit it along with the REAF form.

Yes	No	Categories of participants	Form to be completed
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Typically Developing population(s) above the maturity age *	Informed Consent Form
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Typically Developing population(s) under the maturity age *	Guardian Informed Consent Form

* Maturity age is defined by national regulations in laws of the country in which the research is being conducted.

5 f. Relationship between the principal investigator and participants.

Is there any relationship between the principal investigator (student), co-investigators(s), (supervisor) and participant(s)? For example, if you are conducting research in a school environment on students in your classroom (e.g. instructor-student).

YES NO

If YES, specify (use the space provided in the box).

6. Potential Risks of the Proposed Research Study.

6 a. i. Are there any potential risks, psychological harm and/or ethical issues associated with the proposed research study, other than risks pertaining to everyday life events?

YES NO

If YES, specify below and answer the question 6 a.ii.

6 a.ii Provide information on what measures will be taken in order to exclude or minimise risks described in 6.a.i.

6 b. Choose the appropriate option

		Yes	No
i.	Will you obtain a written informed consent form from all participants?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii.	Does the research involve, as participants, people whose ability to give free and informed consent is in question?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii.	Does this research involve participants who are children under maturity age? If you answered YES to question iii, complete all following questions. If you answered NO to question iii, do not answer Questions iv, v, vi and proceed to Questions vii, viii, ix and x.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv.	Will the research tools be implemented in a professional educational setting in the presence of other adults (i.e. classroom in the presence of a teacher)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
v.	Will informed consent be obtained from the legal guardians (i.e. parents) of children?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
vi.	Will verbal assent be obtained from children?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
vii.	Will all data be treated as confidential? If NO, explain why confidentiality of the collected data is not appropriate for this proposed research project, providing details of how all participants will be informed of the fact that any data which they will provide will not be confidential.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
viii.	Will all participants/data collected be anonymous? If NO, explain why and describe the procedures to be used to ensure the anonymity of participants and/or confidentiality of the collected data both during the conduct of the research and in the subsequent release of its findings.	<input checked="" type="checkbox"/>	<input type="checkbox"/>

	Yes	No
ix. Have you ensured that personal data and research data collected from participants will be securely stored for five years?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
x. Does this research involve the deception of participants? If YES, describe the nature and extent of the deception involved. Explain how and when the deception will be revealed, and who will administer this debrief to the participants:	<input type="checkbox"/>	<input checked="" type="checkbox"/>

6 c. i. Are there any other ethical issues associated with the proposed research study that are not already adequately covered in the preceding sections?

Yes No

If YES, specify (maximum 150 words).

6.c.ii Provide information on what measures will be taken in order to exclude or minimise ethical issues described in 6.c.i.

6 d. Indicate the Risk Rating.

High Low

7. Further Approvals

All researchers are advised to check the regulations pertaining to research and General Data Protection Regulation (GDPR) of the country in which the research will take place as each country may have different restrictions on conducting research. **Are there any other approvals required (i.e., from a ministry or public agency in the country, in addition to ethics clearance from UREC) in order to carry out the proposed research study?**

YES NO If YES, specify.

8. Application Checklist

Mark ✓ if the study involves any of the following:

- Children and young people under 18 years of age, vulnerable populations such as children with special educational needs (SEN), racial or ethnic minorities, socioeconomically disadvantaged persons, pregnant women, elderly, malnourished people, and ill people.
- Research that foresees risks and disadvantages that would affect any participant of the study such as anxiety, stress, pain or physical discomfort, harm risk (which is more than is expected from everyday life) or any other act that participants might believe is detrimental to their wellbeing and/or has the potential to / will infringe on their human rights / fundamental rights.
- Risk to the well-being and personal safety of the researcher.
- Administration of any substance (food / drink / chemicals / pharmaceuticals / supplements / chemical agent or vaccines or other substances (including vitamins or food substances) to human participants.
- Results that may have an adverse impact on the natural or built environment.

9. Further documents

Check that the following documents are attached to your application:

		ATTACHED	NOT APPLICABLE
1	Recruitment advertisement (if any)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	Informed Consent Form / Guardian Informed Consent Form	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3	Research Tool(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4	Gatekeeper Letter	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5	Any other approvals required in order to carry out the proposed research study, e.g., institutional permission (e.g. school principal or company director) or approval from a local ethics or professional regulatory body.	<input type="checkbox"/>	<input checked="" type="checkbox"/>

10. Final Declaration by Applicants:

- (a) I declare that this application is submitted on the basis that the information it contains is confidential and will only be used by Unicaf University for the explicit purpose of ethical review and monitoring of the conduct of the research proposed project as described in the preceding pages.
- (b) I understand that this information will not be used for any other purpose without my prior consent, excluding use intended to satisfy reporting requirements to relevant regulatory bodies.
- (c) The information in this form, together with any accompanying information, is complete and correct to the best of my knowledge and belief and I take full responsibility for it.
- (d) I undertake to abide by the highest possible international ethical standards governing the Code of Practice for Research Involving Human Participants, as published by the UN WHO Research Ethics Review Committee (ERC) on <http://www.who.int/ethics/research/en/> and to which Unicaf University aspires to adhere.
- (e) In addition to respect any and all relevant professional bodies' codes of conduct and/or ethical guidelines, where applicable, while in pursuit of this research project.



I agree with all points listed under Question 10

Student's Name:

Supervisor's Name:

Date of Application:

Important Note:

Save your completed form (we suggest you also print a copy for your records) and then submit it to your UU Dissertation/project supervisor (tutor). **In the case of student projects, the responsibility lies with the Faculty Dissertation/Project Supervisor.** If this is a student application, then it should be submitted via the relevant link in the VLE. Please submit only electronically filled in copies; **do not** hand fill and submit scanned paper copies of this application.

Appendix C: Gatekeeper Letter



UU_GL - Version 2.0



Gatekeeper letter

Institution / Organization :

Address:

Date:

Subject: Gatekeeper Letter

Dear Sir/Madam,

I am a doctoral student at Unicaf University the Unicaf University, Zambia.

As part of my PhD degree, I am carrying out a study on "The Impact of Managerial Competence on Team Cohesion and Managerial Effectiveness in Small and Medium Enterprises in the Nigerian Oil and Gas Industry"

I am writing to enquire whether you would be interested in/willing to participate in this research. Subject to approval by Unicaf Research Ethics Committee (UREC) this study will be using closed-ended questionnaire as the survey instrument

The purpose of this study is to provide further insight into the direct causal effect of managerial competence on managerial effectiveness (latent variable 2) and team cohesion in SMEs, with a moderation effects of uncertainty management on the link between team cohesion and managerial effectiveness." I am supervised by Dr. Ilias Vlachos.

You will be required to provide email addresses of staff in your project team who have at least one year project experience and are aged 25-60 years old to enable me perform my research and collect data relating to project experience in your company. The data collection will run from the 20th of June 2024, to the 20th of July, 2024. The questions will take about 30 minutes to answer.

Thank you in advance for your time and for your consideration of this project. Kindly please let me know if you require any further information or need any further clarifications.

Yours Sincerely,

Student's Name: Umuteme, Adokiye Obele

Student's E-mail: adokiye.umuteme@gmail.com

Student's Address and Telephone: Unicaf University, Zambia: +234-08032439920

Supervisor's Title and Name: Dr. Ilias Vlachos

Supervisor's Position: Teacher

Supervisor's E-mail: i.vlachos@unicaf.org

Appendix D: Consent Form



Informed Consent Form	
Part 1: Briefing of Participants	
Student's Name:	Umuteme, Adokiye Obele
Student's E-mail Address:	adokiye.umuteme@gmail.com
Student ID #:	R2004D10760161
Supervisor's Name:	Dr. Ilias Vlachos
Supervisor's Email Address:	i.vlachos@unicaf.org
University Campus/Program:	Unicaf University in Zambia: PhD Doctorate of Philosophy Business
Research Project Title:	The Impact of Managerial Competence on Team Cohesion and Managerial Effectiveness in Small and Medium Enterprises in the Nigerian Oil and Gas Industry
Provide a short description of the research project. To be precise, explain:	
(1) what the main aim of the research project is	
The main aim of this study is to formulate a model to explore the correlation between managerial competence, managerial effectiveness, and team cohesion, with team cohesion acting as a mediator, and considering the moderating impact of uncertainty management.	
(2) what the participant will need to do during the data collection	
The participants will provide answers to the questions in the closed-ended survey instrument based on their experience.	
(3) where the data collection will take place	
The data collection will take place online using google form. A link to the nsurvey tool will be sent through email to prospective participants..	
(4) the duration of participant's involvement in the data collection	
The data collection will run from the 20th of May, 2024, to the 21st of June, 2024. The questions will take about 30 minutes to answer.	
(5) whether the participant will be paid	
No monetary reward will be provided to participants.	
<p>The above named student is committed to ensuring participant's voluntarily participation in the research project and guaranteeing there are no potential risks and/or harms to the participants. Participants have the right to withdraw at any stage (prior or post the completion) of the research without any consequences and without providing any explanation. In these cases, data collected will be deleted.</p> <p>All data and information collected will be coded (kept anonymous) and will not be accessible to anyone outside this research. Data described and included in any dissemination activities will only refer to coded and nonidentifiable information ensuring beyond the bounds of possibility participant identification.</p> <p>If you have any issues or concerns about the study, please contact:</p>	
Dr. Ilias Vlachos	i.vlachos@unicaf.org
I, <u>Umuteme, Adokiye Obele</u> , ensure that all information stated above is true and that all conditions have been met.	
Date:	24-Apr-2024

Informed Consent Form
Part 2: Certificate of Informed Consent

This section is mandatory and should to be signed by the participant

Student's Name: Umuteme, Adokiye Obele

Student's E-mail Address: adokiye.umuteme@gmail.com

Student ID #: R2004D10760161

Supervisor's Name: Dr. Ilias Vlachos

Supervisor's Email Address: i.vlachos@unicaf.org

University Campus/Program: Unicaf University in Zambia: PhD Doctorate of Philosophy Business

Research Project Title:

The Impact of Managerial Competence on Team Cohesion and Managerial Effectiveness in Small and Medium Enterprises in the Nigerian Oil and Gas Industry

I have read the foregoing information about this study, or it has been read to me. I have had the opportunity to ask questions and discuss about it. I have received satisfactory answers to all my questions and I have received enough information about this study. I understand that I am free to withdraw from this study at any time without giving a reason for withdrawing and without any negative consequences. I consent to the use of multimedia (e.g., audio recordings, video recordings) for the purposes of my participation in this study. I understand that my data will remain anonymous and confidential, unless stated otherwise. I consent voluntarily to be a participant in this study.

Participant's Print name:

Participant's Signature:

Date:

If the Participant is illiterate:

I have witnessed the accurate reading of the consent form to the potential participant, and the individual has had an opportunity to ask questions. I confirm that the aforementioned individual has given consent freely.

Witness's Print name:

Witness's Signature:

Date:

Appendix E: Survey Instrument



Survey Instrument

RESEARCH TITLE

THE IMPACT OF MANAGERIAL COMPETENCE ON MANAGERIAL EFFECTIVENESS AND TEAM COHESION IN SMALL AND MEDIUM ENTERPRISES IN THE NIGERIAN OIL AND GAS INDUSTRY

I am Adokiye Obele Umuteme, currently pursuing a doctoral research program at the UnIcaf University, Zambia campus. The primary objective of this study is to formulate a model to explore the correlation between managerial competence, managerial effectiveness, and team cohesion, with team cohesion acting as a mediator, and considering the moderating impact of uncertainty management. My supervisor for this research is Dr. Ilias Vlachos.

The survey instrument is divided into two sections. The initial section is designed to collect your personal data solely for the purpose of this study. The second section consists of 57 questions, which can be completed within 20 minutes. Your participation in this study is based on your age, being above 25, and having a minimum of 1 year of experience in project execution.

If you require any additional information or clarification, please feel free to contact me. Each question in the survey is marked with a red asterisk as a reminder to provide an answer. I sincerely appreciate your time and consideration in contributing to this project. Thank you in advance.

Consent Box: *I have read the foregoing information about this study, or it has been read to me. I have had the opportunity to ask questions and discuss it. I have received satisfactory answers to all my questions and I have received enough information about this study. I understand that I am free to withdraw from this study at any time without giving a reason for withdrawing and without negative consequences. I consent to the use of questionnaire for the purposes of my participation in this study. I understand that my data will remain anonymous and confidential, unless stated otherwise. I consent voluntarily to be a participant in this study.*

Kindly tick this box for the consent to participate in this study

SECTION I: PERSONAL DATA

This section collects your personal data for the purpose of this research only.

Age*

- 25-29 30-35 36-40
 41-45 46-50 Above 50

Sex*

- Male Female

Ethnicity*

- White Asian African (Nigerian)
 Other African Nations Middle Eastern Other

Education Level*

- High School Diploma (OND) Degree/HND
 Masters Doctorate

Years of Experience Working in the Organization*

- 1 – 2 years 3-4 years 5 years and above

Years in Current Position in the Organization*

- 1 year 2 years 3 years and above

SECTION II: MAIN SURVEY

The definition of the ratings are as follows: *Strongly Disagree (1), Disagree (2), Neutral (3), Agree (4), Strongly Agree (5)*. The number "5" is the highest rating for each question. You are to select the option that best describes your experience. The categories are four, comprising of managerial competence, managerial effectiveness, team cohesion and uncertainty management. In each category, there are dimensions that explains the various ways each phenomenon can be measured. The **asterisk** indicates that all questions in this category must be answered.

MANAGERIAL COMPETENCE*

S/ N	Code	Operationalized Questions	Score Rating				
			Strongly Disagree 1	Disagree 2	Neutral 3	Agree 4	Strongly Agree 5
1	MCED 1	I need to seek approval from My manager/owner for routine tasks and decisions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	MCED 2	I am empowered to participate in decision-making processes.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	MCED 3	I feel comfortable approaching My manager directly for discussions and decisions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	MCRO1	My manager actively encourages and motivates me through incentives to take on diverse roles.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5	MCRO2	My manager assesses and identifies the diverse skills and talents of employees to optimize their roles within the organization through performance discussion.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	MCRO3	My management team provides the needed technology and trains staff for enhancing productivity and competitiveness.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	MCAF1	I am flexible in working with other people in my company.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	MCAF2	I received adequate training and needed resources to cope with the ever-changing demands and requirements in our industry.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	MCAF3	I am comfortable to face unexpected challenges or changes in my job responsibilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10	MCEL1	The leadership encourages and support innovation within the organization	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11	MCEL2	I believe My manager effectively manages and develops the talents of the employee in the organization.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12	MCEL3	My manager promote teamwork and collaboration among employees	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13	MCEL4	My manager is open to feedback and suggestions from employees	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14	MCPS1	I am encouraged to contribute my ideas or suggestions for problem-solving.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15	MCPS2	Innovative ideas suggested by employees to solve problems or improve processes are implemented.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16	MCPS3	My manager is open to exploring new ideas and solutions for existing challenges.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17	MCRM1	Our organization use feedback from customers, suppliers, and the local community to improve our services.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18	MCRM2	I am satisfied with my organization's relationship management efforts with staff, clients and local community.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19	MCRM3	My manager identifies and addresses any potential conflicts or misunderstandings that may arise in the course of relationship management with stakeholders.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

MANAGERIAL EFFECTIVENESS*

S/ N	Code	Operationalized Questions	Score Rating				
			Strongly Disagree 1	Disagree 2	Neutral 3	Agree 4	Strongly Agree 5
20	MERO1	My manager sets clear and achievable goals and objectives each team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21	MERO2	My manager effectively tracks progress toward goals and adjusts strategies when necessary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22	MERO3	Manager achieve expected goals timely.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23	MERO4	My manager's communication of goals, expectations, and progress to the team positively contributes to driving results.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24	METO1	My manager prioritizes tasks and allocate time effectively to ensure efficient task organization within specified timeframes.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25	METO2	My manager delegate tasks to the appropriate team members based on their strengths and abilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26	METO3	My manager allocates resources such as budgets, materials, and personnel wisely to achieve optimal outcomes in task organization.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27	METO4	My manager is knowledgeable in the utilization of project management methodologies and tools to streamline tasks and ensure successful project	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

		completion					
28	METW1	My manager effectively leads by example to promote teamwork in our workplace	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29	METW2	My manager inspires and motivates me and my colleagues to work collaboratively as a team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30	METW3	My manager provides clear guidance and direction to help our team achieve its goals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31	METW4	My manager demonstrates shared leadership behaviour in promoting teamwork	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32	MERB1	My manager effectively resolves conflicts within our team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33	MERB2	My manager actively listens to team members and colleagues when addressing issues or concerns.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
34	MERB3	My manager demonstrates a high level of emotional intelligence when interacting with team members and colleagues	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
35	MERB4	My manager promotes and facilitates collaboration among team members, ensuring that employee's contributions are valued	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

TEAM COHESION*

S/ N	Code	Operationalized Questions	Score Rating				
			Strongly Disagree 1	Disagree 2	Neutral 3	Agree 4	Strongly Agree 5
36	TCTC1	The frequency and quality of communication within the team, including information sharing and feedback among team members improves productivity?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
37	TCTC2	Team members understand and are aligned with the organizational goals.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
38	TCTC3	I am clear about my role within the team and the roles of another team members	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
39	TCTC4	Team members work together, assist each other, and engage in joint problem-solving activities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
40	TCTC5	I trust my team members and feel psychologically safe to express my opinions and take risks within the team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
41	TCTC6	Conflicts are effectively resolved within the team.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
42	TCSC1	Team members engage in social interactions, such as casual conversations and team-building exercises.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
43	TCSC2	I trust my team members, and I have strong sense of acceptance within the team.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
44	TCST3	I believe that the team members share common values and attitudes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
45	TCSC4	Team members are willing to listen, understand, and provide assistance to each other.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
46	TCSC5	I believe that diverse perspectives and backgrounds are accepted and respected within the team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
47	TCSC6	Conflicts are effectively handled within the team.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

UNCERTAINTY MANAGEMENT*

S / N	Code	Operationalized Questions	Score Rating				
			Strongly Disagree 1	Disagree 2	Neutral 3	Agree 4	Strongly Agree 5
48	UMRA1	I often find myself having to do tasks in a way that seems different from what is expected in my role	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
49	UMRA2	There are cases where I receive incompatible requests from two or more superiors simultaneously, leading to confusion in my tasks.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
50	UMRA3	My organization effectively communicates my roles, responsibilities, and expectations to me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
51	UMRA4	I feel I have the necessary autonomy and decision-making power to carry out my responsibilities effectively	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
52	UMRA5	I receive clarification and support when you have role-related queries or concerns.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
53	UMRC1	I engage in tasks that are not essential or relevant.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
54	UMRC2	I am confident about the extent of my authority.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
55	UMRC3	I have a clear understanding of the objectives of my job.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
56	UMRC4	I ensure I manage my time effectively to accomplish various tasks.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
57	UMRC5	The instructions about what needs to be done are straightforward and easy to understand.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

End of Survey. Thank You