

THE EFFECT OF CAPABILITY MANAGEMENT PRACTICES ON ORGANIZATIONAL PERFORMANCE IN THE NIGERIAN OIL AND GAS SECTOR

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ABSTRACT

This study examined the effect of capability management practices on organisational performance in the Nigerian oil and gas sector. Specifically, it investigated the effects of knowledge management capability, technological capability, intellectual capability, and human capital capability on organisational performance. A descriptive survey research design was adopted. The study population comprised employees of Midwestern Oil & Gas Company Limited and Sterling Global Oil & Gas Limited, both located in Kwale, Delta State. A sample of 100 respondents was determined using the Taro Yamane sample size formula, while stratified sampling was employed to ensure adequate representation. Data were collected from both primary and secondary sources and analysed using correlation and multiple regression techniques. The findings revealed that knowledge management capability, technological capability, intellectual capability, and human capital capability each exerted a positive and statistically significant effect on organisational performance. Among these, human capital capability had the strongest influence, indicating that employees' experience, knowledge, and competencies enhance decision-making, operational efficiency, and overall organisational performance. The study concluded that capability management practices are critical drivers of organisational performance in the Nigerian oil and gas industry. It therefore recommends that management should prioritise the recruitment of qualified personnel, continuously assess employees' competencies, and strengthen staff development initiatives through regular training and capacity-building programmes to sustain organisational performance.

Keywords: *Capability management practices, organisational performance, knowledge management capability, technological capability, intellectual capability, human capital capability.*

INTRODUCTION

Organisations operate in an increasingly dynamic business environment characterised by rapid technological change, globalisation, intense competition, and evolving customer expectations. These environmental changes require managers to continuously develop organisational capabilities that enable firms to adapt, innovate, and sustain competitive advantage (Jensen, 2022). Consequently, organisations are increasingly relying on valuable, rare, inimitable, and non-substitutable internal resources to improve performance and achieve strategic objectives.

Capability management practices refer to an organisation's ability to develop, integrate, and deploy its knowledge, technology, intellectual resources, and human capital to enhance organisational effectiveness. These capabilities enable firms to respond proactively to environmental changes, exploit emerging opportunities, and mitigate external threats (Okwemba, 2022). Organisations that

effectively manage their capabilities are better positioned to improve operational efficiency, customer satisfaction, innovation, and overall organisational performance.

Effective capability management requires the active participation of managers and employees in implementing organisational strategies and maintaining effective communication among stakeholders (David, 2018). Unlike strategy formulation, successful implementation demands coordinated efforts across all organisational levels through top-down, cross-functional, and bottom-up approaches (Kamaku et al., 2021). However, research suggests that relatively little is known about the organisational capabilities necessary for effective strategy implementation and sustained high performance (Kamaku et al., 2021). David (2018) similarly observed that limited empirical attention has been devoted to understanding how strategic plans are translated into day-to-day organisational activities.

Capability management encompasses several organisational dimensions, including knowledge management, technological capability, intellectual capability, human capital capability, leadership capability, communication capability, and innovation capability (Kamaku et al., 2021). These capabilities significantly influence organisational outcomes such as financial performance, market performance, and employee performance. Kaplan and Norton (2015) emphasised that organisational performance should be evaluated using both financial and non-financial indicators through the Balanced Scorecard framework, which integrates financial outcomes, customer satisfaction, internal business processes, and learning and growth perspectives. Given the increasing importance of organisational capabilities within the Nigerian business environment, particularly in the oil and gas sector, it is imperative to examine how capability management practices influence organisational performance.

Statement of the Problem

The Nigerian oil and gas industry operates in an environment characterised by rapid technological advancement, global competition, fluctuating market conditions, and increasing customer expectations. These challenges require organisations to continuously develop and strengthen their capabilities to remain competitive and achieve sustainable performance. Failure to develop critical organisational capabilities may reduce firms' ability to respond effectively to environmental changes, thereby threatening their long-term survival.

In the knowledge-driven economy, intangible resources such as employee expertise, organisational knowledge, technological competence, and intellectual assets have become important sources of competitive advantage. Nevertheless, many organisations continue to struggle with developing and effectively managing these capabilities, resulting in reduced operational efficiency, weak innovation, and poor organisational performance.

Although previous studies have highlighted the importance of organisational capabilities in enhancing firm performance, empirical evidence on the specific effects of knowledge management capability, technological capability, intellectual capability, and human capital capability within the Nigerian oil and gas sector remains limited. Furthermore, existing studies have largely focused on manufacturing firms and other sectors, with relatively little attention given to oil and gas companies operating in Delta State.

This study therefore seeks to fill this gap by examining the effect of capability management practices on organisational performance in selected oil and gas companies in Delta State, Nigeria.

Objectives of the study

The general objective of the study is to determine the effect of capability management practices on organisational performance in the Nigerian oil and gas sector. The specific objectives of the study are to:

- i. assess the effect of knowledge management capability on organisational performance.
- ii. ascertain the effect of technological capability on organisational performance
- iii. investigate the effect of intellectual capability on organisational performance
- iv. determine the effect of human capital capability on organisational performance

Research Questions

- i. To what extent does knowledge management capability influences organizational performance?
- ii. What is the effect of technological capability on organisational performance?
- iii. To what extent does intellectual capability influences organizational performance?
- iv. What is the effect of human capital capability on organisational performance?

Research Hypotheses

To permit empirical investigation of the subject matter of this study, the following null hypotheses were raised:

- Ho₁: Knowledge management capability does not significantly affect organisational performance.
Ho₂: Technological capability has no significant effect on organisational performance.
Ho₃: Intellectual capability has no significant effect on organisational performance.
Ho₄: Human capital capability has no significant effect on organisational performance.

REVIEW OF RELATED LITERATURE

Capability Management Practices

The capability view is founded on the premise that organisations develop distinctive ways of performing activities and solving organisational problems, which remain relatively stable over time (Dosi, Faillo, & Marengo, as cited in Okwemba, 2019). Although firms may operate within the same industry and produce similar products, they differ in their organisational practices due to the unique capabilities they have accumulated over time. These capabilities represent firm-specific knowledge and competencies that enable organisations to address challenges effectively and achieve superior performance (Dosi, Nelson, & Winter, as cited in Okwemba, 2019).

Capability management practices encompass the skills, knowledge, and routines that enable firms to perform specialised activities more effectively than competitors. Core capabilities are valuable organisational assets that are difficult for competitors to imitate and form the basis of sustainable competitive advantage. Consequently, organisations derive competitive strength by excelling in a limited number of capability areas where they possess superior expertise (Dosi, Faillo, & Marengo, as cited in Okwemba, 2019).

Knowledge Management Capability and Organisational Performance

Knowledge management capability refers to an organisation's ability to create, acquire, store, share, and effectively utilise knowledge to achieve organisational objectives (Okwemba, 2019). According to Darroch and McNaughton (2013), it involves processes that facilitate the generation, dissemination, and application of knowledge across the organisation. In today's knowledge-driven economy, knowledge is recognised as a strategic resource that enhances innovation, decision-making, and organisational competitiveness.

Studies indicate that organisations possessing strong knowledge management capabilities are more likely to achieve superior performance because knowledge promotes innovation, improves coordination, and enhances responsiveness to environmental changes (Tseng & Lee, 2014). Protogerou, Caloghirou, and Lioukas (2011) further argue that knowledge generated by employees can be institutionalised and transformed into organisational assets that improve performance.

Similarly, Tseng and Lee (2014) maintain that dynamic capabilities serve as the mechanism through which knowledge capabilities translate into improved organisational performance. Knowledge management capability is commonly assessed through knowledge acquisition, knowledge protection, and knowledge leverage (Okwemba, 2019).

Technological Capability and Organisational Performance

Technological capability refers to an organisation's ability to develop, adopt, and utilise technologies for improving products, processes, and operational efficiency (Terjesen, Patel, & Covin, 2011). Organisations with superior technological capabilities are more innovative, efficient, and competitive because they continuously improve production processes and develop products that meet changing customer needs.

Porter (as cited in Okwemba, 2019) argues that technological capability significantly influences an organisation's strategic positioning, enabling firms to pursue either cost leadership or product differentiation strategies. Organisations with strong technological capabilities can reduce production costs, improve product quality, introduce innovative features, and achieve economies of scale, thereby enhancing organisational performance (Obembe, Ojo, & Ilori, 2014; Chahal & Kaur, 2014).

Intellectual Capability and Organisational Performance

Intellectual capability comprises the knowledge, skills, experience, and intellectual resources that organisations utilise to generate innovation and competitive advantage. Wu, Chang, and Chen (2008) found that intellectual capital plays a significant role in promoting organisational innovation, while social capital and entrepreneurial orientation strengthen this relationship. Similarly, Subramaniam and Youndt (2005) reported that organisational, human, and social capital positively influence innovation capability, although their effects vary depending on the type of innovation.

Despite these findings, previous studies focused primarily on manufacturing industries in Taiwan and paid limited attention to other strategic capabilities such as networking and information technology. Consequently, the applicability of these findings to other sectors and contexts remains limited.

Human Capital Capability and Organisational Performance

Human capital capability refers to the knowledge, competencies, skills, and experience possessed by employees that enable organisations to achieve superior performance. Auw (2010), in a study of professional service firms in Hong Kong, China, and Taiwan, found that human capital capability significantly enhances competitive advantage. Likewise, Chuang, Liu, and Chen (2015) established that human resource capability positively influences organisational effectiveness through improved teamwork and employee satisfaction.

Similarly, Khandekar and Sharma (2015) reported that human resource capability significantly predicts organisational performance and sustainable competitive advantage among Indian organisations. However, the contextual differences between these studies and the current study suggest the need for further investigation within different organisational and geographical settings.

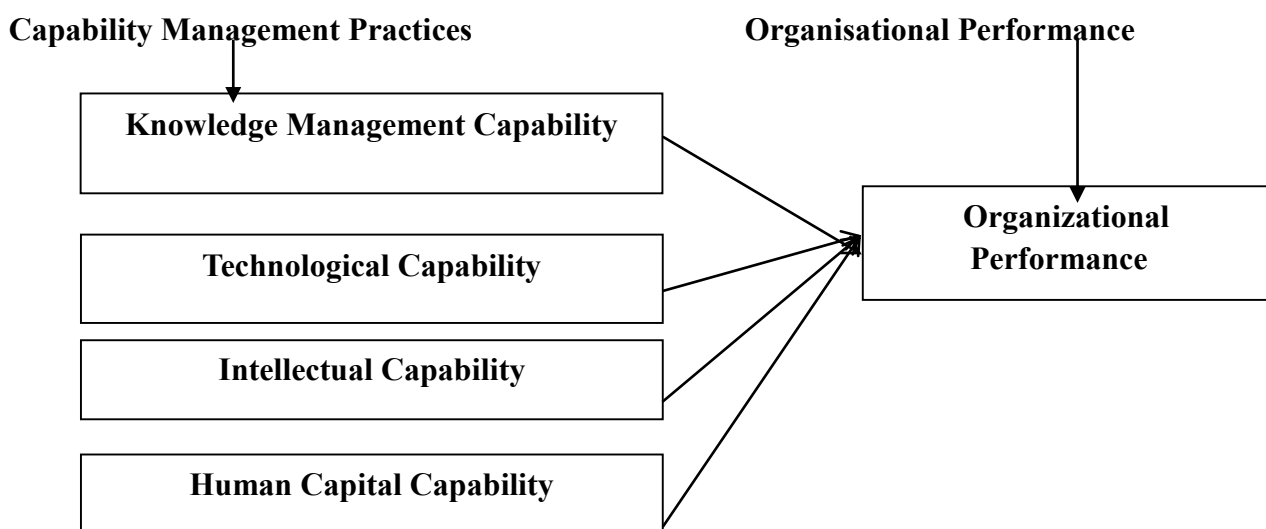
Organizational Performance

Organisational performance refers to the extent to which an organisation effectively achieves its objectives through efficient utilisation of available resources. According to Protogerou, Caloghirou, and Lioukas (2011), organisational performance is reflected in effective coordination of organisational activities, while Theodosiou, Kehagias, and Katsikea (2012) argue that efficient coordination enhances both productivity and overall organisational effectiveness.

Ruekert and Walker (as cited in Okwemba, 2019) identify three dimensions of organisational performance: effectiveness, efficiency, and adaptability. Okwemba (2019) further argues that organisational performance depends on achieving favourable market positions and sustained competitive success. Dornier and Selmi (as cited in Okwemba, 2019) identify environmental conditions, organisational characteristics, and human factors as key determinants of performance. Organisational performance can be assessed using both financial and non-financial indicators. Financial measures include profitability, return on investment, sales growth, and market share, while non-financial measures include customer satisfaction, employee satisfaction, product quality, innovation, efficiency, and social and environmental performance (Ganeshkumar & Nambirajan, 2013).

Conceptual Framework

Fig. 1: Conceptual framework of major variables and their hypothesised relationship.



Source: Researcher's model (2026).

Theoretical Review

Resource-Based View (RBV) Theory

The **Resource-Based View (RBV)** theory, propounded by **Penrose (1959)**, posits that firms are bundles of heterogeneous resources and capabilities that can generate sustainable competitive advantage when they are valuable, rare, inimitable, and non-substitutable (Ambrosini & Bowman, 2009). The theory argues that superior organizational performance depends on a firm's ability to effectively acquire, develop, and deploy strategic resources that competitors cannot easily imitate (Idenedo et al., 2025; Asiagwu & Idenedo, 2024; Idenedo et al., 2023; Idenedo & Ebebuwa, 2022; Idenedo & Wali, 2022; Igwe et al., 2020; Dahir & Paul, 2019; Didia & Idenedo, 2017).

RBV was further advanced by Wernerfelt, Barney, and Helfat and Martin (as cited in Dahir & Paul, 2019; Helfat & Martin, 2015), who emphasised that competitive advantage arises from firm-specific resources and capabilities rather than market positioning alone. The theory also recognises that organisations require complementary capabilities to effectively deploy available resources in response to changing market conditions (Rugman & Verbeke, 2002; Teece et al., 2007). Consequently, firms possessing superior resources, organisational systems, and capabilities are better positioned to achieve improved performance.

The RBV is relevant to this study because it explains how organisational capabilities serve as strategic resources that enhance firm performance. It provides the theoretical basis for examining how capability management practices influence organisational performance.

Knowledge-Based Capability Theory

The Knowledge-Based Capability Theory (KBCT) extends the Resource-Based View by recognising knowledge as the most important strategic resource for achieving sustainable competitive advantage (Penrose, 1959; Grant, 2016). The theory argues that organisational success depends not merely on possessing resources but on creating, integrating, sharing, and applying specialised knowledge effectively.

Knowledge exists within employees, organisational culture, routines, systems, policies, and processes, making it difficult for competitors to imitate (Kogut & Zander, 2013). According to Grant (2016), the primary role of management is to develop mechanisms that facilitate knowledge creation, integration, and transfer across the organisation. Similarly, Conner and Prahalad (2006) observed that repeated organisational routines transform individual knowledge into organisational capability, while Dierickx and Cool (2009) viewed firms as repositories of valuable knowledge assets. Knowledge creation and transfer are therefore critical organisational processes that strengthen innovation, improve decision-making, and enhance organisational performance (Von Krogh et al., 2001; Dyer & Singh, 2008). The theory is relevant to this study because it explains how knowledge management capability enables organisations to develop sustainable competitive advantage and improve organisational performance.

Empirical Review

Mbamba and Mwashuuya (2019) investigated the relationship between information and communication technology (ICT) adoption and access to financial services among microfinance institutions (MFIs) in Tanzania using a cross-sectional survey design. Findings from exploratory factor and regression analyses revealed that ICT adoption significantly improved service accessibility, operational efficiency, and geographical coverage. However, the study focused on access to financial services rather than organisational performance.

Njihia (2019) examined the effect of information technology integration on the performance of Kenyan microfinance institutions using questionnaire data. The findings indicated that IT integration significantly improved institutional efficiency, market share, and profitability by enhancing operations in finance, marketing, and human resource management. Nevertheless, the study focused only on regulated MFIs in Kenya.

Mwai (2019) assessed the influence of technological and financial innovations on the financial performance of Kenyan MFIs using panel data covering 2014–2018. Regression analysis showed that technological innovation significantly improved financial performance, particularly liquidity and firm size, although its influence on return on assets and credit risk was relatively weak. Unlike the present study, the research measured only financial performance.

Chengecha (2016) investigated the relationship between knowledge management capability and competitiveness in Kenya's banking industry using a descriptive survey design. The findings revealed that effective knowledge creation, management, and sharing enhanced customer relationships and organisational competitiveness. Similarly, Onyango (2016) reported that knowledge management capability positively influenced the performance of international humanitarian organisations in Kenya.

Obembe et al. (2014) evaluated the effects of technological capability, innovation, and clustering on the performance of furniture manufacturing firms in Southwestern Nigeria using data collected from 360 firms. The study found that technological capability significantly enhanced innovation and

organisational performance. Likewise, Mararo (2013) established that knowledge management practices significantly improved competitive advantage among insurance companies in Kenya. Similarly, Zawislak et al. (2012) examined 133 Brazilian manufacturing firms and found that investment in technological capability significantly improved firms' economic performance. Collectively, these empirical studies provide strong evidence that organisational capabilities, particularly technological and knowledge management capabilities, are significant drivers of organisational performance. However, limited empirical evidence exists regarding the combined influence of these capability dimensions on organisational performance within the Nigerian context, thereby justifying the present study.

METHODOLOGY

This study adopted a descriptive survey research design. The population of the study consists of employees of Midwestern Oil & Gas Company Limited and Sterling Global Oil & Gas, in Kwale, Delta State. The research population comprises lower, middle and senior management employees within the Oil & Gas industry during the period of questionnaire administration in the industry. Therefore, the total population is 200, which consists of the employees of the selected Oil & Gas companies. Source: Human Resource Department.

Table 1: Names of Oil & Gas and the Population of Employees

HOSPITALS	POPULATION
Midwestern Oil & Gas Company Limited	100
Sterling Global Oil & Gas	100
TOTAL	200

Source: Human Resource Department (2026)

For this research, the appropriate number of representations of the population for the study was determined using the Taro Yamani sample size formula, thus:

$$n = \frac{N}{1 + N(e)^2}$$

Where n = sample size sought
 e = level of significance
 N = population size

Working reveals the desired sample size thus:

$$n = \frac{200}{1 + 200(0.05)^2}$$

$$n = \frac{200}{1 + 200(0.0025)}$$

$$n = \frac{200}{1+1}$$

$$n = \frac{200}{2} = 100$$

Sample size n = 100

The probability sampling method used was the stratified random technique. This is due to the fact that the researcher grouped the population into strata such as senior, middle and lower management staff. It is a sampling technique that gives every member of the population an equal chance of participation. Data were collected using a questionnaire. Content validity was used, whereby the questionnaire was sent to a team of lecturers who are experts in the field of management sciences to assess the content of the questionnaire so as to determine whether the questions contained in the questionnaire were adequate to collect relevant information that relates

to the objectives of the study. Cronbach’s Alpha-based test was used to test for the reliability coefficient.

Table 2: Reliability Check

Items	Reliability
knowledge management capability	.745
technological capability	.788
Intellectual capability	.733
Human capital capability	.741
Organizational performance	.724

Source: Analysis of Field Survey, 2026.

From Table 2 above, A reliability coefficient of 0.724 and above is high and is acceptable, while a reliability coefficient of 0.5 and below shows poor reliability (Sekaran, as cited in Olannye, 2017). Data collected for the study were coded and tabulated. Statistical techniques of data analysis were applied in the study, which include descriptive statistics and regression analysis. The descriptive statistics include frequency distribution, measures of central tendency (mean) and measures of variation (standard deviation). The results were presented in tables. The inferential statistical technique that was used was multiple regression. It was used for the purpose of ascertaining the strength of the relationship that exists among variables, determining to what extent the independent variable accounted for change in the dependent variable, as well as to test the statistical significance that exists among variables, respectively.

METHODOLOGY

This study adopted a descriptive survey research design to examine the effect of capability management practices on organisational performance in the selected oil and gas firms. The study population comprised employees of Midwestern Oil & Gas Company Limited and Sterling Global Oil & Gas, both located in Kwale, Delta State. The target population included lower-, middle-, and senior-level management employees who were actively employed during the period of data collection. According to records obtained from the Human Resource Departments of the selected firms, the total population was 200 employees, as presented in Table 1.

Table 3: Population of Employees in the Selected Oil and Gas Firms

Company	Population
Midwestern Oil & Gas Company Limited	100
Sterling Global Oil & Gas	100
Total	200

Source: Human Resource Departments of the Selected Firms (2026).

The sample size was determined using **Taro Yamane's (1967)** formula:

$$n = \frac{N}{1 + N(e)^2}$$

Where:

- n = sample size
- N = population size (200)
- e = level of precision (0.05)

Substituting the values:

$$n = \frac{200}{1 + 200(0.05)^2} = \frac{200}{1 + 0.5} = \frac{200}{1.5} = 133$$

However, in line with the study design and respondents' accessibility, 100 questionnaires were administered to employees across the two firms.

A stratified random sampling technique was employed to ensure adequate representation of employees across the three management levels (senior, middle, and lower management). This technique provided each member of the population with an equal opportunity of being selected.

Primary data were collected using a structured questionnaire. The instrument was subjected to content validity through expert review by lecturers in the Management Sciences, who assessed the relevance and adequacy of the questionnaire items in measuring the study variables. Reliability was established using Cronbach's Alpha, and the coefficients obtained are presented in Table 4.

Table 4: Reliability Statistics

Variable	Cronbach's Alpha
Knowledge Management Capability	0.745
Technological Capability	0.788
Intellectual Capability	0.733
Human Capital Capability	0.741
Organizational Performance	0.724

Source: Field Survey (2026).

The Cronbach's Alpha coefficients ranged from 0.724 to 0.788, exceeding the minimum acceptable threshold of 0.70, indicating that the instrument possessed satisfactory internal consistency (Sekaran, as cited in Olannye, 2017).

Data collected were coded and analysed using descriptive and inferential statistics. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were used to summarise respondents' characteristics and responses, while the results were presented in tables. Multiple regression analysis was employed to test the study hypotheses, determine the nature and strength of the relationships between capability management practices and organisational performance, and assess the extent to which the independent variables explained variations in the dependent variable.

RESULTS AND DISCUSSION

Presentation of Data

Table 5: Demographic of Respondent Profile

S/N	Characteristics of the Respondents	Frequency	Percentage (%)
1	Gender:		
	Male	40	40
	Female	60	60
	Total	100	100
2	Age Range:		
	Below 30	20	20
	31-40	40	40
	Above 41	20	20
	Total	100	100
3	Marital Status:		
	Single	40	40
	Married	60	60
	Divorced	-	-

	Total	100	100
4	Work Experience:		
	1-5years	30	30
	6-10years	50	50
	Above 10years	20	20
	Total	100	100

Source: Field Survey, 2026

Table 5 shows the demographic profile of the respondents. Of the 100 respondents, 40 (40%) were male, and 60 (60%) were female. The age distribution indicates that 20 (20%) were below 30 years, 40 (40%) were between 31 and 40 years, while 40 (40%) were aged 41 years and above. In terms of marital status, 60 (60%) were married, and 40 (40%) were single. Regarding work experience, 50 (50%) had 6–10 years of experience, 30 (30%) had less than five years, and 20 (20%) had over 11 years of work experience.

Data Analysis

Table 6: Correlation matrix of capability management practices and organisational performance

Correlations

	knowledge management capability	technological capability	intellectual capability	human capital capability	organizational performance
knowledge management capability Pearson Correlation	1	.436**	.352**	.182**	.612**
Sig. (2-tailed)		.000	.000	.000	.000
N	100	100	100	100	100
technological capability Pearson Correlation	.436**	1	.514**	.234**	.342**
Sig. (2-tailed)	.000		.000	.000	.000
N	100	100	100	100	100
intellectual capability Pearson Correlation	.352**	.514**	1	.269**	.238**
Sig. (2-tailed)	.000	.000		.000	.000
N	100	100	100	100	100
human capital capability Pearson Correlation	.182**	.234**	.269**	1	.284**
Sig. (2-tailed)	.000	.000	.000		.000
N	100	100	100	100	100
organizational performance Pearson Correlation	.612**	.342**	.238**	.284**	1
Sig. (2-tailed)	.000	.000	.000	.000	
N	100	100	100	100	100

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

The result in Table 6 shows that the tested variables showed an overwhelming positive correlation ranging from .182 to .612, implying that there is a significant positive association between the variables of effective capability management practices on organizational performance.

Table 7: Regression Analysis for capability management practices and organisational performance Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	14.927	1.691		8.829	.547
knowledge management capability	.255	.191	.205	2.603	.000
technological capability	.205	.284	.104	1.241	.000
intellectual capability	.263	.179	.165	1.797	.000
human capital capability	.310	.178	.210	2.131	.000

a. Dependent Variable: organisational performance

Source: Field Survey (2026).

The result from the regression analysis in Table 7 showed that knowledge management capability exhibits positive effects on organisational performance ($\beta = 0.205$, $P > 0.05$). Technological capability exhibits positive effects on organisational performance ($\beta = 0.104$, $P > 0.05$); intellectual capability exhibits positive effects on organisational performance ($\beta = 0.165$, $P > 0.05$); and human capital capability exhibits positive effects on organisational performance ($\beta = 0.210$, $P > 0.05$).

Table 8: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.597 ^a	.357	.345	1.6246

a. Predictors: (Constant), human capital capability, intellectual capability, technological capability, knowledge management capability

Source: Field Survey (2026).

Table 8 presents the coefficient of determination (Adjusted R^2), indicating that capability management practices accounted for 34.5% (Adjusted $R^2 = 0.345$) of the variation in organisational performance. This implies that capability management practices significantly explain organisational performance, while the remaining 65.5% of the variation is attributable to other factors not included in the model.

Hypotheses Testing

Decision Rule

The hypotheses were tested at the 5% level of significance. The null hypothesis (H_0) was rejected where the p-value was less than 0.05 ($p < 0.05$); otherwise, it was not rejected.

Hypothesis One

H₀₁: Knowledge management capability does not significantly affect organisational performance. The regression result in Table 7 revealed that the significance value ($p = 0.000$) is less than 0.05. Consequently, the null hypothesis was rejected, indicating that knowledge management capability has a positive and statistically significant effect on organisational performance.

Hypothesis Two

H₀₂: Technological capability has no significant effect on organisational performance. The regression analysis showed a significance value of 0.000, which is less than 0.05. Therefore, the null hypothesis was rejected, indicating that technological capability significantly influences organisational performance.

Hypothesis Three

H₀₃: Intellectual capability has no significant effect on organisational performance. The regression result produced a significance value of 0.000, which is below the 0.05 threshold. Hence, the null hypothesis was rejected, confirming that intellectual capability has a significant positive effect on organisational performance.

Hypothesis Four

H₀₄: Human capital capability has no significant effect on organisational performance. The regression analysis yielded a significance value of 0.000, which is less than 0.05. Accordingly, the null hypothesis was rejected, indicating that human capital capability significantly enhances organisational performance.

Discussion of Findings

Knowledge Management Capability and Organisational Performance

The findings revealed that knowledge management capability has a positive and significant influence on organisational performance. Both correlation and regression analyses showed that improvements in knowledge acquisition, sharing, and application enhance organisational performance. These findings corroborate those of Musuva et al. (2013), who reported that knowledge capability positively influences firm performance. Similarly, Tseng and Lee (2014) found that knowledge management capability improves organisational performance, while Mohammad et al. (2012) established that knowledge acquisition, application, technology infrastructure, organisational culture, and organisational structure significantly enhance firm performance.

Technological Capability and Organisational Performance

The study established that technological capability significantly improves organisational performance. The correlation and regression results indicate that organisations adopting modern technologies are better positioned to develop innovative products, improve operational processes, and establish strategic alliances. This finding is consistent with previous studies by Chantanaphant et al. (2013), Reichert and Zawislak (2014), Tsai (2014), Yam et al. (2015), and Otiso (2017), all of whom reported a significant positive relationship between technological capability and organisational performance.

Intellectual Capability and Organisational Performance

The findings demonstrate that intellectual capability positively and significantly influences organisational performance. Organisations that invest in employees' knowledge, skills, and expertise are more likely to achieve superior performance. This finding supports earlier studies by Kariuki et al. (2015), Ochieng (2015), Mungai (2014), and Ngugi (2013), which found intellectual capability to be a significant predictor of organisational performance.

Human Capital Capability and Organisational Performance

The study further revealed that human capital capability has a significant positive effect on organisational performance. Employees' experience, knowledge, and competencies enhance

decision-making, operational efficiency, and overall organisational effectiveness. This finding agrees with those of Chuang et al. (2015), Khandekar and Sharma (2015), Moloji (2018), and Auw (2010), who found that human capital capability contributes significantly to improved organisational performance.

Conclusion

The study concludes that capability management practices significantly improve organisational performance in the Nigerian oil and gas sector. Specifically, knowledge management capability enhances organisational learning, knowledge sharing, and innovation, thereby improving performance. Technological capability facilitates the adoption of modern technologies, enabling organisations to develop new products, improve processes, and strengthen strategic partnerships. Intellectual capability contributes to performance through effective knowledge development and sharing, while human capital capability improves organisational efficiency by leveraging employees' knowledge, skills, and experience. Overall, all four dimensions of capability management were found to have significant positive effects on organisational performance.

Recommendations

1. Oil and gas firms should strengthen technological capability by investing in modern technologies, strategic collaborations, expert training, and external partnerships to enhance innovation and competitiveness.
2. Organisations should improve knowledge management capability by promoting continuous learning through on-the-job training, mentoring, coaching, workshops, seminars, and knowledge-sharing initiatives.
3. Management should enhance intellectual capability by encouraging innovation, creativity, knowledge development, and collaboration through regular training, conferences, and research support.
4. Human resource managers should strengthen human capital capability by recruiting competent personnel based on merit, providing continuous professional development, and periodically assessing employees' knowledge, skills, and experience to improve organisational performance.

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