

Linking strategic innovation management to operational success in the upstream petroleum regulatory commission of the South-South region

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Abstract - This study focuses on strategic innovation management and operational performance using the Upstream Petroleum Regulatory Commission South-South Nigeria. The study adopted a survey design and questionnaire as instruments for data collection. The total population of the study comprised 497 staff of the organization. A calculation of the sample size using the Taro Yamane method produced a result of 222. A proportionate allocation formula was applied in the distribution of the survey in the following states: River State, Bayelsa, Akwa Ibom, Delta, and Edo State, Nigeria. Out of 222 copies of a questionnaire sent to the participants; only 207 were returned and utilized for the study while the remaining 15 copies were not used. The hypotheses were statistically tested and analyzed using ordinary least squares and Pearson correlation methods at a 5% level of significance. The findings of research objective one indicate that integrated management practices (IMP) have a significant impact on organizational effectiveness (OE) when the p-value (.000) is less than a 5% level of significance ($p < 0.05$). Finally, organizations should develop comprehensive innovation strategies that align with their overall business objectives. This involves integrating innovation across all functions and ensuring that it supports both short-term goals and long-term vision.

Keywords: strategic innovation management; integrated management practices; quick response to technology; operational performance; and organizational responsiveness

1. Introduction

The integration of advanced technology in strategic management has become imperative for organizations seeking competitive advantages in today's dynamic business environment (Davenport & Harris, 2007; Dodgson, Gann & Phillips, 2014; Brynjolfsson & McAfee, 2014). Technological advancement helps organizations to better understand customer needs, streamline operations, and develop innovative solutions that are aligned with current market demands (StartUs Insights, 2024; Davenport & Harris, 2007; Dodgson, Gann & Phillips, 2014). Advanced

technologies such as artificial intelligence, big data analytics, and machine learning offer companies unprecedented capabilities for enabling automation, enhancing data analysis capabilities, and improving decision-making processes (Doudna & Sternberg, 2017).

Strategic innovation management is a complete combination of innovation activities with the strategic direction of an organization, ensuring that innovation is a continuous and consistent process aimed at achieving long-term business goals (McKinsey & Company, 2022). It is crucial for organizations targeting to achieve competitiveness, drive growth, and adapt to rapidly changing markets. It involves the systematic planning and implementation of innovations to achieve long-term business goals. It enables companies to develop unique products, services, and processes that set them apart from competitors (Apple Inc, 2023). Operational performance refers to the ability of an organization to convert its resources into goods and services (Johnson, Martin & Thompson, 2023).

Previous studies have identified a correlation between strategic innovation management and operational performance with mixed results. A study by Liu, Liu, and Feng (2024) using Chinese-listed firms from 2010-2021 found that substantive and strategic green innovation significantly improves the financial and environmental performance of organizations. The same study also found that strategic green innovation weakens the financial performance of firms. Another study by Stevens (2020) found that strategic formulation enhances organizational performance. Additionally, Koko and Zuru (2019), also found that management practices enhance business performance. Similarly, Germanos (2012) also found that SMEs that used sophisticated planning activities (such as written business plans) enhanced their long-term performance.

Considering the above studies, there is insufficient research on the extent to which integrated management practices influence organizational effectiveness using case study of Upstream Petroleum Regulatory Commission in Selected States in the Niger Delta, Region. Previous studies related to this subject were done in other countries and different industries. There was no study using the Nigerian regulatory sector. The gap relating to geographic location, case study, the use of concepts, and analytical tools is what motivates the researchers to engage in this academic endeavor to identify and fill research gaps in this study.

Despite the global shift towards advanced technological advancements, NUPRC's current technology infrastructure remains inadequate to meet firm standards. This problem can lead to increased operational risks (such as youth restiveness and vandalism of pipelines), and a potential environmental danger. Therefore, the lack of a coherent integrated management system, historical problems, bureaucratic inertia, and outdated operational practices would negatively influence the firm's operational efficiency.

This study's overarching goal is to examine strategic innovation management and operational performance of the Upstream Petroleum Regulatory Commission in the South-South Region. Drawn from the general objectives, the specific objective seeks to ascertain the extent to which integrated management practices influence the organizational effectiveness of the Upstream Petroleum Regulatory Commission. The study is limited to the South-South region. A probability stratified sampling or proportionate allocation formula was applied in the distribution of the survey in the following states: River State, Bayelsa, Akwa Ibom, Delta, and Edo State, Nigeria.

The Industrial Revolution, which began in the late 18th century, was driven by the advent of computers, the internet, and mobile technologies. This revolution has transformed how people communicate, access information, and conduct business, leading to the emergence of the global digital economy (Friedman, 2016). The technological advancement required strategic thinking to drive needed changes in the organization.

As emphasized by Tidd and Bessant (2018), the focus of strategic innovation management is on creating a sustainable innovation ecosystem within the organization that supports ongoing learning and adaptation. This approach ensures that companies remain agile

and responsive to emerging opportunities and threats, thus maintaining their competitive edge over time.

Strategic Innovation Management (SIM) focuses on the entire set of innovative practices involving the analysis of competition mechanisms, such as creating an innovative vision, harmonizing business strategy, expanding the strategy to all organizational levels, market tendencies, technologies, and competitor acts (Sanchez et, 2011).

It is one of the components of strategic innovation management. Liker (2020) defined integrated management practices as the holistic coordination and unification of various management functions and processes within an organization to achieve strategic goals efficiently and effectively. According to the author, integrated management practices facilitate continuous improvement and operational excellence by fostering a collaborative environment where information flows seamlessly across different functional areas.

According to Jon and Randy (2009), performance is defined as the discrepancy between a company's actual output or results and its targets, goals, and expected results. When an organization devotes a significant portion of its development efforts to advancing organizational learning, this is one of the three key factors that affect organizational performance.

Bashaer et al (2016) claim that organizational performance reflects organizational cultures and leadership skills. According to Ekwochi (2016), every organization must invest heavily in effective planning if it wants to succeed. A set of fundamental procedures known as planning can be used to create, alter, state, implement, and formally record the expectations of an organization.

Organizational effectiveness is a measure of how much an organization achieves its objectives and fulfills its mission through optimal resource use. This includes financial performance, customer satisfaction, internal processes, and the ability to innovate and adapt to market changes (Daft, 2022). According to Robbins and Coulter (2023), organizational effectiveness is the extent to which an organization achieves its objectives by converting input into outputs efficiently. This involves achieving high performance in areas such as profitability, market share, customer satisfaction, and employee engagement. Organizational effectiveness is the extent to which an organization achieves desired results through the alignment of strategy, processes, and people. This is assessed by evaluating key performance indicators in various areas, such as financial performance, operational efficiency, and stakeholder satisfaction (Jones & George, 2023).

This study is anchored on Blue Ocean Theory (BOT) postulated in 2005 by Kim and Mauborgne. The theory was coined by Kim and Mauborgne in their groundbreaking book titled "Blue Ocean Strategy: How to Create Uncontested Market Space and Make the Competition Irrelevant" (Kim & Mauborgne, 2005; Kuras, 2020). The idea of the blue ocean theory is to explore uncontested marketplaces by creating values that are different from existing markets. The aim is to make competition irrelevant and attract new customers who are willing to pay a premium for your offer. Blue ocean theory contrasts with red ocean theory, which is based on competing in existing markets with similar products or services.

Recent research and case studies continue to explore the applicability of Blue Ocean Strategy across various industries. For instance, a study by Agarwal and Yadav (2021) applied BOS principles to the healthcare industry, suggesting strategies for creating new market space amidst increasing competition. Another study by Gupta and Jain (2023) identified and analyzed the application of BOS in the technology sector, highlighting how companies like Apple have successfully implemented blue ocean strategies through product differentiation and innovation.

Finally, the blue ocean theory is relevant to the study on strategic innovation management and operational performance because it focuses on the uncompetitive marketplace with the potential to create innovation where technological, regulatory, and cultural barriers exist on the product/service quality of firms. This section identifies previous research on strategic

innovation management and operational performance in Nigeria and the rest of the world are stated below. Some of these studies are stated below.

Gehring (2024) investigated the impact of managerial practices on perceived organizational effectiveness using corporate foundations in Western Europe. The study explored three European countries, Switzerland, Liechtenstein, and Germany to carry out the study. Data was collected using a survey research design from a sample of 408 corporate foundations. Principal Component Analysis and the Ordinary Least Square method were employed as analytic tools. The findings showed that organizational characteristics variables (Organizational experience) positively influenced the perceived effectiveness of charitable foundations. Findings also showed that stakeholders' or experts' experience positively influenced organizational effectiveness.

Ejo-Orusa and Adim (2019) Examined the Strategic Innovation Management and Organizational Survival of Hotels, in Nigeria. The study used a correlation cross-sectional design and questionnaire as instruments for data collection. The Krejcie and Morgan method was used to determine the sample size. Only 166 of the 186 distributed questionnaires were filled out and returned, leaving the remaining 20 unused for the study. To test the data, Spearman's rank correlational structure was used. According to the findings, there is a strong correlation between strategic innovation management and organizational survival. The study found that the relationship between strategic innovation management and organizational survival was markedly moderated by organizational structure.

Anrafel (2021) analyzed the impact of integrated management systems (IMS) on organizational competitiveness. The study used systematic literature reviews and meta-analysis methods. The study identified significant benefits of IMS including improved operational performance, cost reduction, sustainability, stakeholder satisfaction, and reduced business risks. Jha et al (2018) ascertained the impact of human resource management practices on organizational effectiveness in India. The study used three information technology corporations. Out of 500 copies of the questionnaire sent out to the participants only 320 were returned and used for the study. A correlational and regression method was used in testing and analyzing the hypothesis. The result showed that human resource management practices such as team building positively influenced the organizational effectiveness of firms.

Doe and Smith (2021) explored the integration of environmental management practices and their impact on organizational competitiveness. The study systematically reviews and synthesizes a wide range of empirical research to provide a comprehensive understanding of the relationship between environmental management practices and organizational competitiveness. The findings of the meta-analytic review reveal a significant positive association between the adoption of environmental management practices and enhanced organizational competitiveness.

Ugwu et al (2023) analyzed the influence of production planning on service quality using Nigerian Retail Firms. The study employed a correlational survey design and questionnaire as instruments for data collection. Non-probability judgmental sampling technique was adopted in the distribution of the 144 structured questionnaires. Pearson Product Moment Correlation was used to test and analyze the hypotheses. The result showed that aggregate planning and strategic planning positively influenced service quality.

Mashingaidzel and Chinakidzwa (2021) conducted a study on the mediating role of strategy formulation approaches on the relationship between strategy formulation and the financial performance of manufacturing SMEs in Harare, Zimbabwe. The study adopted a quantitative research approach and structured questionnaire to collect primary data from a population of 368 SME owners/managers in the manufacturing industry. The hypotheses were tested and analyzed using correlation techniques. Findings showed an insignificant relationship between strategy formulation and the financial performance of the firm.

Arome (2020) Examined the Impact of Strategic Planning on the Performance of Small and Medium Sized Businesses in Nigeria. The study employed a cross-section, mixed research

survey methodology, using questionnaires and interviews to collect data from owners and managers of SMEs through surveys (136 responses were received) and semi-structured interviews (20 participants). The findings indicated that strategic planning positively impacts the performance of Nigerian SMEs.

Kisimbo and Omondi (2023) examined strategic implementation and organizational performance in Kenya. A descriptive research design was employed to design a survey using a five-point Likert scale. The target population comprised 147 managers from Kenya Rural Authority Mount Kenya Region. Both inferential and descriptive statistics, correlation, and regression analysis were used in testing and analyzing the hypothesis. Findings showed that resource allocation, leadership, communication, and culture have a significant positive influence on organizational performance.

Donkor et al (2019) examined the interacting effect of market dynamism and strategic planning on the performance of small- and medium-scale enterprises (SMEs) in Ghana. This study has used a quantitative approach and purposive sampling to select 200 small- and medium-sized manufacturing and service firms in Ghana. The study hypothesis was tested using hierarchical multiple regression analysis to generate results. This study found that a consistent application of strategic planning methodologies contributes to the advancement of SME performance in Ghana.

Koko and Zuru (2019) Examined the Strategic Planning and Performance of Enterprises in Sokoto, Nigeria. The study population included enterprise senior managers, general managers, and managing directors. Questionnaires and descriptive surveys were used as data collection tools for the study. Eighty people made up the study's entire population. Only 52 of the 80 questionnaires distributed to the participants were returned and used for the study, leaving the remaining 28 unutilized. Least squares structural modeling (SEM) was used in the study to analyze. Data was gathered to test the study's main hypothesis. The outcome demonstrated a strong positive correlation between strategic planning practice and enterprise performance.

2. Method

3.1 Research Design

A correlational research design was used to examine the correlation between strategic management and operational performance of the upstream petroleum regulatory commission in the South-South Region, Nigeria. The primary data was sourced from the questionnaire.

The study's target population of the staff of the Upstream Petroleum Regulatory Commission in the South-South Region. The geographical coverage comprised of five states in the South-South region which include Rivers, Bayelsa, Akwa Ibom, Delta, and Edo State. The population distribution is stated below.

Table 1 The Population Distribution Statistics of NUPRC

S/N	Location	Departments	Positions	Population
1.	River State (Port Harcourt)	Corporate Services and Administration, Health, Safety, Environment and Community, Economic Regulation and Strategic Planning, Exploration and Acreage Management	Chief Commission Executive, Directors, Deputy Directors, Assistant Directors, Senior Managers, Deputy Managers, Regulatory Officers and Junior Officers.	125
2.	Bayelsa State	Corporate Services and Administration, Health, Safety, Environment and Community, Economic Regulation and Strategic	Chief Commission Executive, Directors, Deputy Directors, Assistant Directors, Senior Managers,	87

		Planning, Exploration and Management Acreage	Managers, Deputy Managers, Regulatory Officers and Junior Officers.	
3.	Akwa-Ibom State (Eket Field Office)	Corporate Services and Administration, Health, Safety, Environment and Community, Economic Regulation and Strategic Planning, Exploration and Acreage Management	Chief Executive, Deputy Assistant Directors, Senior Managers, Deputy Managers, Regulatory Officers and Junior Officers.	95
4.	Delta State (Warri Regional Office)	Corporate Services and Administration, Health, Safety, Environment and Community, Economic Regulation and Strategic Planning, Exploration and Acreage Management	Regional Coordinator, Directors, Deputy Directors, Assistant Directors, Senior Managers, Deputy Managers, Regulatory Officers and Junior Officers.	115
5.	Edo State (Benin Field Office)	Corporate Services and Administration, Health, Safety, Environment and Community, Economic Regulation and Strategic Planning, Exploration and Acreage Management	Operations, Coordinator, Directors, Deputy Directors, Assistant Directors, Senior Managers, Deputy Managers, Regulatory Officers and Junior Officers.	75
	Total			497

Source: (Personnel Records of Nigerian Upstream Petroleum Regulatory Commission)

The Taro Yamane sample size determination formula for a finite population was considered to calculate the sample size for this study. It is a simplified formula and is applicable when the population size is known. This can be expressed mathematically as:

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

Where, n = Sample Size; N = Population Size; e = desired margin of error or significance level 5% (0.05); 1 = Constant.

$$n = \frac{497}{1 + 497(0.05)^2}$$

$$n = \frac{497}{2.2425} \quad n = 222$$

To distribute the questionnaire to the selected firm, the formula for Bowler's proportional allocation method was used, with 205 as the sample size. The Bowlers proportional allocation formula is stated below as follows:

$$n_h = \frac{nN_h}{N}$$

Where n_h = Bowley's allocation formula
 N_h = Number of items in each stratum in the population.
 n = Sample size
 N = Population size

Applying the formula, we have:

- (i) River State $n_h = \frac{222 (125)}{497} = 55.83 = 56$
- (ii) Bayelsa State, $n_h = \frac{222 (87)}{497} = 38.86 = 39$
- (iii) Akwa-Ibom State, $n_h = \frac{222 (95)}{497} = 42.43 = 42$
- (iv) Delta State, $n_h = \frac{222 (115)}{497} = 51.37 = 51$
- (v) Edo State, $n_h = \frac{222 (75)}{497} = 33.50 = 34$

For this study's purposes, face and content validity were examined using a management expert to ensure that the instrument adequately covers the subject the researcher is interested in. Additionally, Cronbach's Alpha test was employed to determine the instrument's reliability and internal consistency. This was achieved by subjecting the questionnaire to a pilot test that served as a trial run to determine the effectiveness of the instrument.

Analysis of variance (ANOVA) and simple linear regression models were used to determine the influence of the independent variable against the dependent variable. A decision rule was used to decide whether to accept or reject the null and alternate (H_0 , H_A) hypotheses when the p-value is less than or higher than the critical value at the level of significance of 5%.

The model of this study was determined using a simple regression method which is stated below.

According to Montgomery et al. (2021), the simple linear regression equation is expressed as:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_n X_n + \epsilon \text{-----Equation (2)}$$

$$Y_{(SIM)} = \beta_0 + \beta_1 X_{(OE)} + \beta_2 X_{(OT)} + \beta_3 X_{(OF)} + \beta_4 X_{(OR)} + \beta_5 X_{(OC)} + \beta_n X_n + \epsilon \text{-----Equation (3)}$$

$$OE = \beta_0 + \beta_1 X_{IMP} + \epsilon \text{-----Equation (4)}$$

Where:

Y (OP) the dependent variable which represent Operational Performance

X (SIM) is the independent variable which represents Strategic Innovation Management

β_0 is the intercept.

β_1 - β_5 is the coefficient of the dependent variables

ϵ (epsilon) is the error term.

OE = Organizational Effectiveness

3. RESULTS AND DISCUSSION

3.1 Data Presentation and Description

The main objective of this study is to examine the influence of strategic innovation management on the operational performance of the Upstream Petroleum Regulatory Commission in the South-South Region. Out of 222 copies of questionnaires given to the respondents, only 207 were completed and returned; the other 15 were not returned and were used in the analysis.

Table 2 Questionnaire Response Rate

S/N	Nigerian Upstream Regulatory Commission	Population	Copies Distributed	Copies Filed and Returned	Percentage (%)

1	River State	125	56	54	26.09
2	Bayelsa State	87	39	34	16.43
3	Akwa-Ibom State	95	42	40	19.32
4	Delta State	115	34	30	14.49
5	Edo State	75	51	49	23.67
	Total	497	222	207	100

Source: (Field Survey, 2024)

3.2 Analysis of Research Question One

What is integrated management practices' influence on the organizational effectiveness of the Upstream Petroleum Regulatory Commission?

The table below shows participant responses to research question one using a five-point Likert scale. Instruction: Please tick (✓) a response according to your own opinion using.

Strongly Agree (SA=5); Agree (AG=4); Undecided (UN=3); Disagree (DA=2); Strongly Disagree (SD=1).

3.2.1 Test of Hypothesis One

H₀₁: Integrated management practices do not significantly influence the organizational effectiveness of the Upstream Petroleum Regulatory Commission in Selected States in the Niger Delta, Region.

Table 3 Investigative Questions on Integrated Management Practices and Organizational Effectiveness

S/N	Questions	SA	AG	UN	DA	SD	Total
A.	Integrated Management Practices (Independent Variable)						
1	Our firm enforces regulations on the upstream petroleum operations being carried out under our care.	103	101	2	1	0	207
2	We operate in a dynamic and complex environment.	96	104	0	2	1	207
3	Sometimes, problems of bureaucratic delay can limit the industry's ability to make quick decisions.	92	105	4	2	4	207
4	NUPRC cultivates a culture that supports innovations to achieve long-term goals.	107	89	7	3	1	207
5	We constantly analyze the external environment to determine the best strategies to be followed.	86	102	6	8	2	207
6	The rate of emission of carbon footprint affects the environment.	84	107	8	5	3	207
7	Our company operates according to a clear vision	109	90	3	4	1	207
B.	Organizational Effectiveness (Dependent Variable)						
8	We monitor a client's performance in line with government regulations.	104	93	6	1	3	207
9	Our clients rate our services compared to rivals.	105	92	3	4	3	207
10	Our staff are trained to develop job-specific skills.	102	91	7	5	2	207
11	We have adequate manpower to meet with operational activities.	88	106	5	6	2	207

12	We have created high value in the oil and gas industry due to improved services.	89	108	7	0	3	207
13	We diligently track records of oil industries and provide feedback to them.	100	96	5	4	2	207
14	We constantly review our operational strategy to be the African best oil industry.	98	103	2	1	3	207

Source: (Field Survey, 2024)

3.2.2. Decision Rule

Reject the null hypothesis when the p-value is less than 0.05; otherwise, accept the alternative hypothesis (H_A). Table 6 shows the results of the bivariate linear regression. The null hypothesis which states that integrated management practices do not significantly influence the organizational effectiveness of the Upstream Petroleum Regulatory Commission in Selected States in the Niger Delta, Region was rejected. This is because the p-value (000) is less than the critical value (0.05). On the contrary, the alternate hypothesis which state that integrated management practices significantly influence the organizational effectiveness of the Upstream Petroleum Regulatory Commission in Selected States in the Niger Delta, Region was accepted. The relationship between X (IMP)and Y (OE) is statistically significant (p < 0.05).

Table 4 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.986 ^a	.973	.972	7.94974	2.192

Source: (IBM SPSS Version 25)

a. Predictors: (Constant), IMP = Integrated Management Practices

b. Dependent Variable: OE = Organizational Efficiency

Table 5: Analysis of Variance (ANOVA^a)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	73898.856	1	73898.856	1169.317	.000 ^b
	Residual	2085.544	206	63.198		
	Total	75984.400	207			

Source: (IBM SPSS Version 25)

a. Dependent Variable: OE

b. Predictors: (Constant), IMP

Table 6: Result of Bivariate Linear Regression (Coefficients)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.014	1.789		.567	.575
	IMP	.980	.029	.986	34.195	.000

Source: (IBM SPSS Version 25)

a. Dependent Variable: OE

The R-square value of .973 in Table 4 of the model summary above measures the proportion of the variance in Y-organizational effectiveness (OE) that is explained by the X-integrated management practices, (IMP). The result further shows that integrated management practices explain 97.3 percent of variation (changes) in organizational effectiveness (OE). Thus, a higher value (97.3) indicates that the model is reliable, and the test result is accurate. The adjusted R2 (R-square) value is also shown as .972; this means that integrated management practices (the explanatory) account for 97.2 percent of changes in organizational effectiveness, with the remaining 2.8 percent was being explained by variables not included in the model. Furthermore, the ANOVA regression result demonstrates the suitability of the model with $F= 1169.317$ and p-value of 0.000 indicate that the relationship between the variables is statistically significant supporting the accuracy of the findings above.

3.3 Discussion

The general goal of the study is to investigate the influence of strategic innovation management on the operational performance of the Upstream Petroleum Regulatory Commission in the South-South region. The bivariate linear regression approach was used to statistically test the research hypothesis one. The results show that integrated management techniques have a significant impact on organizational effectiveness. There exists a substantial influence between the independent variable, X (IMP), and the dependent variable, Y (OE).

The summary of the findings is as follows. The findings of research hypothesis one indicates that integrated management practices have a significant impact on organizational effectiveness. The result can be regarded that there exists a substantial influence between the independent variable, X (IMP), and the dependent variable, Y (OE) when the p-value (.000) is less than 5 % level of significance ($p < 0.05$).

4. Conclusion

The broad objective of this study is to examine the influence of strategic innovation management on operational performance. The findings of research objective one indicates that integrated management practices have a significant impact on organizational effectiveness. Through implementing integrated management procedures, including planning, communication, decision-making, and performance monitoring, organizations may guarantee that all their objectives are in line with one another. This result agrees with the literature on the previous findings of Gehringer (2024) which state stakeholders' or experts' experience contributed positively to organizational effectiveness. The result is also supported by the study of Jha, Shenoy, and Rego (2018) which states that human resource management practices such as team building positively influenced the organizational effectiveness of firms.

The researcher concludes that strategic innovation management is essential for improving operational performance based on the study's findings. Organizations can achieve more effective and efficient operations by integrating new concepts and technology with their strategic objectives through the methodical management of innovation. This strategy ensures that innovation efforts are concentrated on areas like process improvement, cost reduction, and productivity growth that will have the biggest effects on performance.

4.1 Recommendations

Based on the findings and conclusion of the study above, the researcher made the following recommendations.

- i. Organizations are advised to prioritize resources toward high-impact areas (such as outdated operational practices, insufficient technical infrastructure, bureaucratic inertia, and historic problems) to address immediate challenges, affecting their potential for growth opportunities, and rebuild the organization's core competencies.
- ii. Organizations should develop comprehensive innovation strategies that align with their overall business objectives. This involves integrating innovation across all functions and ensuring that it supports both short-term goals and long-term vision.

- iii. Organizations should increase investment in infrastructures and capabilities that limit their ability to adapt to changing environments. Effective innovation management, including training, technology, and collaborative tools will enhance their ability to identify, develop, and implement innovative ideas that improve operational performance.

4.2 Suggestions for Further Studies

Future research is advised on digital transformation technologies and operational performance using a comparative study between small and medium-sized enterprises (SMEs) and large enterprises to reveal differences in innovation management practices and their respective impacts on operational performance. Again, future researchers should investigate how organizational structures (e.g., hierarchical, flat) moderate the relationship between management of innovation and operational performance. Finally, future researchers should replicate this study using secondary data to examine the influence of innovation initiatives on financial performance using the public sector.

4.3 Practical Implication of the Study

Research in this area leads to the development of new frameworks in literature by connecting operational performance with strategic innovation management. In addition, the investigator has developed a new model that elucidates the study objectives in the research methodology. Thus, research has added to the existing literature by identifying research and filling the gaps using the Upstream Petroleum Regulatory Commission in the South-South Region.

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