

# Strategic Flexibility and Operational Effectiveness of Oil Producing Firms in Rivers State, Nigeria

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**Abstract:** This study examined the correlation amongst strategic flexibility and operational effectiveness of oil producing firms in Rivers state, Nigeria. A total sample size of 297 was drawn from a population of 1,293 managerial employees in twenty (20) oil producing firms in Rivers state. The simple random sampling technique was utilized in order to avoid bias in selection of sample element. The Pearson product moment correlation was utilized in testing the hypotheses. The investigation shows that strategic flexibility significantly relates with operational effectiveness. It was concluded that Enhancing flexibility in production, marketing and finance will subsequently result in positive increase in the operational effectiveness of oil producing firms. consequently, the study recommended that the management of the oil producing firms should inculcate flexibility in production so as to enhance their operational effectiveness. It was likewise suggested that they should develop a robust financial flexibility in order to withstand external shock in the global market.

**Key words:** *Financial Flexibility, Marketing Flexibility, Operational Effectiveness, Production Flexibility, Strategic Flexibility*

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## 1.0 Introduction

Nowadays, challenging business environment places a demand on companies to incessantly develop flexible strategies to stay abreast and maintain effectiveness in their operations. For several organizations, this creation of flexible strategy is pivotal to adapt to mutable environments. In a vibrant and unstable environment, strategic flexibility is crucial for firms that must withstand divers challenges in business world. Enhancing operational effectiveness (OE) is crucial mostly in the oil producing firms with intent of staying viable, competitive and stay agile in the highly volatile environment. An effective utilization of resources through these core processes aids the firm to avoid waste and acclimatize more

suitable technology to outperform rivalries (Porter, 1996).

However, it is imperative for organizations to deploy strategic flexibility in quest to ensure smooth operational effectiveness (OE) necessary in enhancing firm's success story. The readiness to acclimatize to, anticipate or create future innovative product development performance requirements is called strategic flexibility. Thus, flexibility is a peculiar tactical asset of high prominence to advancing organizations' competitive position, a major influence which could affect their long term survival and profitability (Aranda, 2003). Grewal and Tansuhaj (2001) sees strategic flexibility as firm's aptitude to manage economic and Political uncertainties through quick response to openings and threat. As assumed by Lau (1996), strategic flexibility is the proliferation in a corporation's capacity to respond to competitive, highly changing market environment by supporting knowledge and key capabilities. Upton (2007) defines strategically flexible companies as ones that can shift their operational activities.

The dare need to intensify effectiveness in operation of organizations has drawn the attention of several scholars. Weerd-Nederhof, Altena and Fisscher (2008) did a study and investigate the scale for measuring operational effectiveness (OE). Santa, Ferrer, and Hyland (2017) examined how systems effectiveness relates with operational effectiveness. The problem of how OE of the oil producing firms has persisted over the years despite several attempts by scholars to address the issue. Furthermore, this problem has manifested in low capacity utilization, high cost of production, poor product quality, low productivity and incompetence to compete favourably in the business world.

Several previous work have been carried out by scholars with determination of fostering the organizations operations. Oguntade and Mafimisehi (2010) examined how pricing in livestock feed market relates with operational efficiency. They observed a noteworthy correlation among the studied variables. Boakye and Normanyo (2016) did a critical study on how effective strategic sourcing impact the operational efficiency in Komfo teaching hospital. The research revealed a noteworthy relationship between effective strategic sourcing and operational efficiency. Depaiva, Freitas, Barbosa and Pizzolato (2018) critically reviewed how environmental management relates with the operational efficiency of Brazilian Public Ports. They observed that the quality environmental management relates with the operational efficiency. Imen, Anke and Riadh (2018) investigated if risk disclosure relates with firm operational efficiency. They observed a positive statistical significance among risk disclosure and operational efficiency. Lawal, Oluoh and Mutari (2018) did an analysis on how asset quality affect operational efficiency of deposit money banks within Nigeria. It was observed that asset quality help enhances operational efficiency. Umoh and Wokocha (2013) examined how production improvement function correlates with corporate operational efficiency. From the extant literature, previous works have not examined how operational effectiveness can be enhanced via strategic flexibility. The dearth of empirical work on how strategic flexibility relates with operational effectiveness is the gap that has informed this study.

## **Research Objectives**

- I. Marketing flexibility and operational effectiveness of oil producing firms in Rivers state, Nigeria.

- II. Production flexibility and operational effectiveness of oil producing firms in Rivers state, Nigeria.
- III. Financial flexibility and operational effectiveness of oil producing firms in Rivers state, Nigeria.

### **Research Questions**

- I. What is the relationship between marketing flexibility and operational effectiveness of oil producing firms in Rivers state, Nigeria?
- II. What is the relationship between production flexibility and operational effectiveness of oil producing firms in Rivers state, Nigeria?
- III. What is the relationship between financial flexibility and operational effectiveness of oil producing firms in Rivers state, Nigeria?

### **Research Hypotheses**

The hypotheses of this study were stated in a null form;

HO<sub>1</sub>: There is no significant relationship between marketing flexibility and operational effectiveness of oil producing firms in Rivers state, Nigeria.

HO<sub>2</sub>: There is no significant relationship between production flexibility and operational effectiveness of oil producing firms in Rivers state, Nigeria.

HO<sub>3</sub>: There is no significant relationship between financial flexibility and operational effectiveness of oil producing firms in Rivers state, Nigeria.

## **2.0 Review of Related Literature**

### **Concept of Strategic Flexibility (SF)**

Flexibility in strategy denotes the firm's ability to react and uninterruptedly adapt to imponderable change (Greenley & Oktemgil, 1998). It can offer a distinctive advantage to enterprises because the aptitudes to create decision making alternatives and different methods of SF to handle dynamic and varying environments, is undoubtedly difficult for rivals to imitate (Sanchez, 1995). Successfully adapting through SF could likely create greater performance and intensify the challenges with competitor's imitation. Consequently, the necessity for decision makers to enhance their SF proficiency is getting increasingly essential. In alignment with this thought, Sharfman and Dean (1997) offer a clarification for this fascinating phenomenon on a rational or cognitive level. This cognitive models or structure could influence the aptitudes for SF by restraining the thinking or thoughtfulness of decision makers and blindfolding them from inventive decision making. Conversely, this notion is yet to be sufficiently developed. As a result, there are constraints to current knowledge in spite of the probable contribution of SF to effectual marketing and competitive advantage. Drawing from Venkatraman and Ramanujam (1986) perception, two main determinant of operational effectiveness of any establishment include operational and financial performance. The operational area measures quality of a

specified product, market share, among others while financial dimension encompasses of indicators like growth in sale, earnings per share and profitability.

### **Production flexibility**

Flexibility in production has remained a key concern in companies, which design products for rapidly changing technologies and are under constant pressure to frequently improve upon their products. Sethi and Sethi (1990) posit that flexibility in production involves operational and material-management flexibility. In the case of production, flexibility targets are to reduce the expenses made on stock. Furthermore, also pertinent for flexible production choice is the direct and indirect links amongst plant-groups and products. The inter-permeability of plants and products increases as a result of these relationships (Jordan & Graves, 1995). Product flexibility is similarly perceived as the effortlessness with which present designs can be reformed in response to alteration in market demands. A manufacturing firm in which both staff and plant responsibilities are defined by product, product line, or market segment. Authority in management is highly decentralized, which seem to make the company respond more to market needs and more malleable to introduce new products. This type of organization is more favourable for companies whose dominant orientation is to a market or consumer group and where flexibility and innovation are more vital than coordinated planning and tight control. Product flexibility is the ease with which a product currently in the process of production can be changed cheaply and quickly' (Sethi & Sethi, 1990). Worren et al. (2002) contended in support of the need for more modality in products for companies carrying out activities in specifically dynamic markets. Their study came to a conclusion that flexible designing of product has certain impact on product flexibility. The production flexibility issue is originated in the evolutionary process of product design and redesign; vital to this process is change. Each evolution involves some change that can probably be categorized in diverse ways, such as adaptive redesign or parametric redesign (Otto & Wood, 2001). In Nazarian, Wang (2012), product flexibility is a substantial part of manufacturing system performance. Chryssolouris, Efthymiou and Papakostas, (2013) defined product flexibility as the capability or aptitude of a system for manufacturing to produce divers part types with the same equipment. In Chryssolouris (1996), product flexibility is assessed by calculating the expected cost of accommodating possible changes that may arise in the future.

### **Marketing Flexibility**

The aptitude of an establishment to possess competitive edge in a market environment is of high relevance to ensuring a healthy organization. Conversely, in view of the turbulent future of the market place, it is imperative for organization to ensure market flexibility geared towards coping with unprecedented varieties. Shalender and Singh (2015) asserted that marketing flexibility is a firm's adeptness to enter and leave markets and similarly to position the firm within current and new markets. The marketing flexible firm achieve reasonable advantage owing to its tendency to make modification and reposition itself swiftly within the global markets. When assessing the connection between flexibility which is market-based and ambiguity in environment, it was noted that providing complex market-based SF in situations of high indecision enhances organization's performance ultimately (Johnson et al. 2003). Prahalad and Hamel (1990) maintained that the actual

source of competitive benefit hinges on company's proficiency in contrast or comparison with its rivals. They contended that the market flexible organization invent new or fresh markets, swiftly enter the evolving markets and were the market is already established, the firms can leave or change the markets depending on the divers' opportunity, prospect or threat that may arise during the period.

Grewal and Tansuhaj (2001) meticulously considered the role of marketing flexibility with the perception of managing the economic crisis and they defined marketing flexibility as the ability of transnational firms to recalibrate the marketing efforts within a short time in alignment to varying environmental context.

### **Financial flexibility (FF)**

According to Gamba and Triatis, (2008) financial flexibility is the proficiency of an organisation to admit and reorganize its financing at a minimal cost. A financially flexible firm can eliminate financial distress during negative shocks, and to readily fund investment when profitable opportunities arise (Gamba & Triantis, 2008). Considering financial flexibility is a way of controlling risk and accumulating investment ability in firms. Financial flexibility strengthens the manager's competence in making future investment. Financial flexibility affords a company the provision of financial alternatives so that in case of unforeseen happenings, proper reaction to boost the value of the business can be rapidly taken (Byoun, 2008). Financially flexible companies have the strength to withstand financial pressures and at profitable situations, it becomes possible to release cash required for the investment without any stress and at minimum cost (Gamba & Triantis, 2007). Financially flexible companies retain for themselves a reserved debt ability so as to apply more investment conservatism policy in the years following. It is a key element in shaping the structure of a company's capital and it is utilized to uphold the debt capability for company's future development purpose or reducing the debts to evade the distress financially in economic recession.

### **Operational Effectiveness**

According to Kovac (2007) operational effectiveness is a positive outcome when inputs is compared with the obtained outcome. Mandl et al. (2008) and Sorber (1999) posit that effectiveness denotes the link among inputs and effects; therefore, effectiveness shows effects irrespective of inputs or resources required to accomplish the objectives. Robbins and Coulter (2005) state that effectiveness means obtaining the utmost possible output from the smallest quantities of inputs. The relevant literature describes different means for measuring of organizational effectiveness. Mandl et al. (2008) maintained that effectiveness cannot be ascertained directly; therefore, diverse approaches to data and methodological framework are used. According to Koh and Saad (2007), benchmarking or comparative analysis are repeatedly used techniques. Operational effectiveness denotes the setting of procedures based on core abilities or competencies inside the organization (Porter, 1996). Specifically, it encompasses improving organization's performance by directing the processes inside the organization in addition to appraising and modifying the processes. Porter (1996) posit that, these processes encourages an improved utilization of firms means thereby enabling the organization to jettison waste, adapt extra suitable technology and outperform rivals.

### **Empirical Review**

Hsien, Jin-Li, and Chia-Lin (2014) researched on financial flexibility of MNE and Operational Performance in Taiwan. A framework of three dimensions to measure MNE flexibility financially was given. This covered; financial capability, liquidity capability and operational capability. They observed that quick ratio and Export ratio, impulsive short-range debt ratio had considerably positive effect on firm operational performance. A study done by Alamro (2015) with the aim of investigating how new product flexibility impact operational performance in Jordan manufacturing enterprises. Questionnaire was designed for data collection. The scales for measurement utilized in this research were modified from earlier empirical inquiry carried out on organizational performance. The population was the manufacturing enterprises in stock exchange market in Amman and this contains 93 industrial firms. 320 surveys instrument were issued. 230 survey instrument were collected; The results point out that NPF do positively influence performance operationally via quality improvement, productivity enhancement, reduction in lead time and cost.

Abdulkareem (2009) researched on how flexibility in strategic associates with the achievement of strategic Objective. Flexibility in market, flexibility of new product, and flexibility in expansion was covered as dimensions of SF. A cross-sectional study was adopted. Employees in upper echelon in manufacturing establishment in Jordan were the targeted population. 225 usable questionnaires were utilized and multiple regression was employed analyzing the data. The results revealed a substantial impact of the three dimensions of SF on the achievement of strategic objectives.

Raheleh and Yousef, (2018) did a work on Flexibility in strategy and firms Innovation with the aim of looking at the impact. The study was classified as descriptive survey regarding the method used for gathering data. The research population includes all managers and employees at Ghalamchi, the Cultural and Educational Centre, which are about 212. The sample size is calculated to be 136 using Cochran's formula. The Cronbach's alpha obtained for strategic flexibility, innovation, and all questionnaires is 0.915, 0.937, and 0.937 respectively which shows high consistency of the measurement instrument. Linear regression was utilized for the analysis of data. Results showed that strategic flexibility does positively and substantially impact organizational innovation. Organizations need to rise their adaptive capacity so as to build their resilience to addressing intra-organizational and environmental shocks. Accordingly, both secondary and primary hypotheses were supported. Results of the contrast of standardized  $\beta$  coefficients show that strategic or tactical flexibility has the most influence on innovation of product (0.826) and the slightest effect on process innovation (0.695) among others.

Yazan, (2018) identify how Flexibility in production, flexibility in market and flexibility in competitiveness; which are the dimensions of SF impact on enterprise effectiveness in hotels in Jordan. Questionnaire was used in collecting data. The descriptive and analytically methodology was utilized in analyzing data that was collected from various respondents. Fifteen (15) hotel represented the population, and sampling element of 150 staffs in marketing and strategy planning department was covered. Results revealed that SF dimensions have direct and encouraging influence on effectiveness in hotels in Jordan. Besides, the utmost impact was competitive flexibility while the least influence was production flexibility#

### 3.0 Methodology

This enquiry is a survey study with a total population of 1293 employees in the managerial cadre from 20 selected oil producing firms was covered. The Krejcie and Morgan (1970) table was utilized to achieve a sample of 297 respondents. The simple random sampling technique, was utilized. The independent variable (strategic flexibility) was operationalized with respect to market flexibility, production flexibility and financial flexibility as given in Beraha, Bingol, Ozkan-Canbolat and Szczygiel (2017). Marketing flexibility was measured with 5 items (e.g. my organization is able to adjust its activities to suit the challenges in the market). 5 items were used in measuring production flexibility (e.g. our organization can easily introduce new product when the need arises). 5 items were used in measuring financial flexibility (e. g. my company possess the ability to easily react to unexpected expenses and investment opportunities). However, the dependent variable (operational effectiveness) was measured with a set of 7 items (e.g. my organization has the capacity to deliver product before deadline, my organization has the ability to raise the features of its product to suit the customers' needs). The study adopted content validity and the Cronbach's alpha was employed in ascertaining the reliability of the instrument. The alpha value was .926, .719 and .744 respectively. The alpha value for operational effectiveness was 912. The Items were rated on a 4-point Likert scale from 1-strongly disagreed, 2-disagree, 3-agree and 4-strongly agreed. The hypotheses were tested using Pearson product moment correlation.

### 4.0 Result and Discussions

From the total of 297 questionnaires which was distributed to respondents, a total of 262 questionnaires representing 88.2% of total distributed questionnaires was successfully retrieved and utilized for the analysis. The hypotheses test was undertaken at a 95% confidence interval implying a 0.05 level of significance. The decision rule is set at a critical region of  $p > 0.05$  for accepting null hypothesis and  $p < 0.05$  for rejecting null hypothesis.

HO<sub>1</sub>: There is no significant relationship between marketing flexibility and operational effectiveness of oil producing firms in Rivers state, Nigeria.

**Table 1:** Marketing Flexibility and Operational Effectiveness

		Correlations	
		Marketing Flexibility	Operational effectiveness
Marketing Flexibility	Pearson Correlation	1	.618**
	Sig. (2-tailed)		.000
	N	262	262
Operational effectiveness	Pearson Correlation	.618**	1
	Sig. (2-tailed)	.000	
	N	262	262

\*\* Correlation is significant at the 0.05 level (2-tailed).

Table 1 shows Pearson correlation (PC) coefficient is 0.618 which shows a positive and strong bearings of the link amongst operational effectiveness and marketing flexibility ( $p = 0.000 < 0.05$ ). This lead to rejecting null hypothesis, while the alternate form of the hypothesis is accept therefore concluding that there is a noteworthy correlation between marketing flexibility and operational effectiveness of oil producing companies in Nigeria.

HO<sub>2</sub>: There is no significant relationship between production flexibility and operational effectiveness of oil producing firms in rivers state, Nigeria.

**Table 2:** Production Flexibility and Operational Effectiveness

		Production Flexibility	Operational effectiveness
Production Flexibility	Pearson Correlation	1	.436**
	Sig. (2-tailed)		.023
	N	262	262
Operational effectiveness	Pearson Correlation	.436**	1
	Sig. (2-tailed)	.023	
	N	262	262

\*\* Correlation is significant at the 0.05 level (2-tailed).

It is observed in table 2 that the Pearson correlation (PC) coefficient is 0.436 which shows a moderate and positive orientation of the correlation amongst flexibility in production and operational effectiveness. The significance value of 0.023 which is less than the 5% level ( $p = 0.023 < 0.05$ ) leads to the null hypothesis rejection, while the alternate form of the hypothesis is accept therefore concluding that a significant relationship exist between production flexibility and operational effectiveness of oil producing companies in Nigeria.

HO<sub>3</sub>: There is no significant relationship between financial flexibility and operational effectiveness of oil producing firms in rivers state, Nigeria.

**Table 3:** Financial Flexibility and Operational Effectiveness

		Financial Flexibility	Operational effectiveness
Financial Flexibility	Pearson Correlation	1	.562**
	Sig. (2-tailed)		.000
	N	262	262
Operational effectiveness	Pearson Correlation	.562**	1
	Sig. (2-tailed)	.000	
	N	262	262

\*\* Correlation is significant at the 0.05 level (2-tailed).

Table 3 shows a coefficient of 0.562 which shows a strong and positive orientation of the association amongst financial flexibility with operational effectiveness. The significance value of 0.000 which is less than the 5% significance level ( $p = 0.000 < 0.05$ ) leads to the null hypothesis rejection, while the alternate form of the hypothesis is accepted, therefore concluding that a noteworthy relationship abounds between financial flexibility and operational effectiveness of oil producing companies in Nigeria.

### **Discussion of Findings**

The result of the bivariate analysis shows a significant direct correlation amongst the studied dimensions of SF and operational effectiveness. Detailed discussion with respect to the hypotheses are given as follows;

#### **Marketing Flexibility and Operational Effectiveness**

The result of the enquiry that reveal how marketing flexibility relates with operational effectiveness showed a noteworthy association amongst marketing flexibility and operational effectiveness. P-value of 0.000 was lesser than 0.05. the correlation value (  $r$  ) of .618 implies a high direct correlation amongst the variables. an effective marketing flexibility in the organization, helps to boost the operational effectiveness of such firm. When marketing flexibility increases, operational effectiveness also increases. Furthermore, the coefficient of determination (  $r^2$  ) was 0.382. This shows that marketing flexibility in the organization was able to account for 38% of the variation in operational effectiveness. This finding align with that of Raheleh and Yousef, (2018) which did a work on SF and Organizational Innovation. Results shows that the dimensions of SF positively impact on organizational innovation. Thus, firms that can easily adapt to market changes can enhancing their operational effectiveness.

#### **Production Flexibility and Operational Effectiveness**

The outcome of the bivariate analysis that reveal how production flexibility relates with operational effectiveness disclosed a noteworthy correlation amongst production flexibility and operational effectiveness. P-value of 0.023 was lower than 0.05 significant level. the correlation value (  $r$  ) of .436 depict a reasonable direct association amongst the variables. This indicate that an increase in production flexibility of oil producing firms in Rivers state, such help enhance the operational effectiveness of such firm. The coefficient of determination (  $r^2$  ) was 0.190. this shows that 19% variation in operational effectiveness of the oil producing firms in Rivers state, can be accounted for by the production flexibility in the organization. This result is in agreement with that of Alamro (2015) with the aim of investigating the impact of new product flexibility (NPF) on operational performance. The results indicated that NPF positively affects operational performance by improving quality, increasing productivity, decreasing cost and lead-time.

### **Financial Flexibility and Operational Effectiveness**

Considering the outcome of the bivariate analysis that show the correlations existing between financial flexibility and operational effectiveness, the result observed a substantial positive correlation between financial flexibility and operational effectiveness. P-value of 0.000 was lesser than 0.05 significant level. The correlation value (  $r$  ) of .562 depict a direct correlation amongst the variables. This indicate that the financial flexibility capability of the oil producing firms will result in upsurge in firms operational efficacy. Furthermore, the coefficient of determination (  $r^2$  ) was 0.316. This shows that 32% variation in operational effectiveness of the oil producing firms in Rivers state, can be accounted for by the financial flexibility of the organization. This result agrees with the study of Hsien, Jin-Li, and Chia-Lin (2014) which observed that financial flexibility in multinational enterprise have significant positive effect on operational performance with respect export ratio, debts from foreign countries, spontaneous short-term debt ratio, and quick ratio. Thus enhancing financial flexibility help enhance operational effectiveness.

### **5.0 Conclusion and Recommendations**

Flexibility plays a vital part in designing operations strategy as it provides the enterprise the aptitude to present new products, customize products and alter capacity swiftly. It also helps organizations to make quick and effective response to varying situations, especially when handling the unsettled firm environment denoted by swift changes. Furthermore, flexibility is a major element of operations strategy, i.e., it is a rapid response to customize product, change product mix, change production quantity, and bring about new products. It is a strategic defense that enables firms to make effective response to changing situations which can be a measure of controlling diverse uncertainties. Enhancing production flexibility, marketing flexibility and financial flexibility will subsequently result in positive increase in the operational effectiveness of oil producing firms. Consequently, it was recommended that;

- I. The oil producing firms in Nigeria should ensure volume flexibility in their production as such will help the organization to utilize resources efficiently and improve on their operational effectiveness.
- II. The oil producing firms should inculcate high flexibility in their production so as to improve the operational effectiveness of the organization.
- III. The production of the oil producing firms should be more flexible to adapt to any market changes to be able to increase the operational effectiveness of the firm.
- IV. The oil producing industries should develop a robust financial flexibility so as to be able to withstand external shock in the international market.
- V. The management of oil producing firms should adopt high level of strategic agility in their organization in order to maintain operational effectiveness irrespective of their environmental dynamism.

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