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## FUEL MANAGEMENT AND SUSTAINABLE COMPETITIVE ADVANTAGE OF OIL AND GAS COMPANIES IN RIVERS STATE, NIGERIA

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### Abstracts

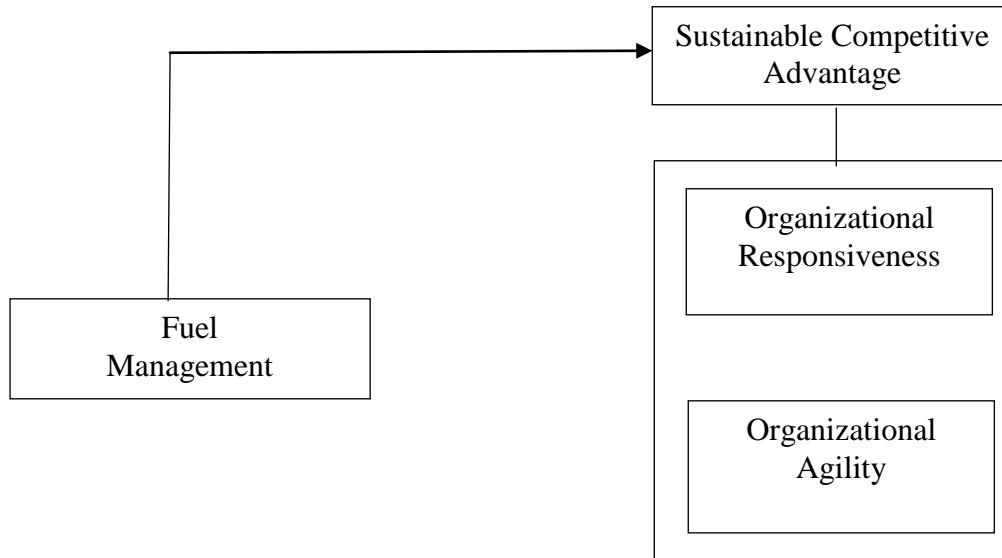
*This study focused on fuel management mechanisms and sustainable competitive advantage of oil and gas companies in Rivers State of Nigeria; specifically, to ascertain the influence of fleet management mechanisms on sustainable competitive advantage. The survey research method was adopted for the study on a population comprised of two hundred and ninety five oil and gas companies domiciled in Rivers of Nigeria, and through the use of the Taro Yamane's formulae, one hundred and seventy oil and gas companies were obtained as the study's sample size. Unit Heads of marketing, production and customer service and their Assistants were identified for the study. Subsequently, the simple random sampling technique was adopted and one management staff was selected from each of the identified departments, to arrive at three management staff for each company and 510 management staff for the whole sample. A 5-point likert-scale questionnaire was administered to respondents, of which 334 copies of the questionnaire were returned, obtaining a 75.1 percent response rate. The study adopted descriptive statistics; simple regressions, multiple regressions and analysis of variance course of action to establish that fuel management was constructive influencing sustainable competitive advantage of oil and gas companies. Fuel management has a very strong, significant and positive influence on organizational responsibility and a strong, significant and positive influence on organizational agility. As such, the study recognizes fuel management mechanisms as catalyst that envisages sustainable competitive advantage in improving oil and gas sector's wellbeing; therefore the study, concludes that, fuel management mechanisms positively and significantly influences sustainable competitive advantage of oil and gas companies in Rivers State, and recommends amongst others that the management of oil and gas companies should scrutinize fuel management mechanism as a procedure that involves incessant modernization of fuel management and guarantee accessibility of oil and gas companies in order to enhance their competitiveness in this 21st century business milieu.*

**Keywords:** Fuel Management, Sustainability, Competitive Advantage, Organizational Responsiveness, Organizational Agility

## **Introduction**

A company's success is as a result of its acquisition of a sustainable competitive advantage. Companies can only acquire sustainable advantage if they possess valuable resources that are rare, difficult to imitate and that are interchangeable. According to Markova (2005) competitive advantage is the hallmarks of the company and its product, which are a value for consumers. Fleet management has become very important that the ability of management to effectively and efficiently coordinate its activities will influence service delivery. Fleet management has become necessary for transport service delivery systems whether in the public or private sector. It is important to note that fleet management for most organizations is seen as having short term effect and short response periods (Martinez, Stapleton & Van Wassenhove, 2011). There are varied services offered through transport and most of these services have been segmented into areas of expertise and specialty which aimed at offering valued services through effective fleet management practices (Bask et al., 2010).

Businesses that have the intention of excelling in their fleet management operations in today's competitive market have to adopt effective and robust managerial strategies to coordinate resources that will facilitate their success and enable them to gain competitive advantage. According to Besiou et al., (2012) fleet management should not solely aim at fulfilling companies' objective but should largely consider the environmental impact as well. Ratcliffe (2007) has identified routing and scheduling, fuel management, acquisition of vehicles, vehicle maintenance as well as driver briefing as fundamental to fleet management practices adapted by organizations to deliver effective services to clients. Transportation has evolved with mankind and its importance to human life has necessitated the need to improve the means of travelling. The advancement in technology has become the basis for which transportation has come to be a great industry in recent times. Through transport individuals are able to travel long distance by means of cars, ships, aircrafts and many more. It is important to note that logistics as well as transportation services in third world countries have been experiencing changes in various service prospects (Bask et al., 2010). Fleet management can be seen as monitoring and increasing how efficient one can perceive transportation fleet (Gitahi & Ogollah, 2014). It includes the management of vehicles like cars, ships, vans and trucks. A lot of functions are considered when it comes to fleet management including financing vehicles, maintenance of vehicles, vehicle telematics, driver shifting and rostering, tracking of assets, management of speed, fuel management as well as health and safety management. The primary aim of fleet management is to significantly decrease the risks associated with vehicle operation, efficiency, productivity and minimizing the transportation and staff cost entirely. Accordingly, Besiou et al., (2012) claim that a strategy that ensures sustainable fleet management is one that seeks to minimize environmental effect through the integration of cleaner vehicles and fuels, fuel efficient operation and driving; and by minimizing quantum of traffic it creates on the road. However, logistics efficiencies are basic to profitable fleet management. The transport sector required to improve its logistics capacity in the field of operation so as to make sure that the organization is performing close to its possible optimal edge.



**Figure1.1:** Conceptual Framework of the influence of Fleet Management Mechanisms on Sustainable Competitive Advantage.

**Source:** Research Desk, 2022

### **Theoretical Foundation - Resource-based View Theory**

The Resource-based theory was introduced by Barney (1991) and has been long-drawn-out from a firm level to highlight how resources, as well as technologies possibly will be exploited and made use of from supply chain partners or merged to obtain competitive advantage (Richey *et al.*, 2012; Gold *et al.*, 2010). Furthermore, the collaboration in itself could be looked upon as a strategic resource or a competence which is extraordinary, priceless and inflexible to imitate, in that way making obtainable competitive advantage (Fawcett *et al.*, 2011; Hartmann & De Grahl, 2011; Gold *et al.*, 2010). The Relational outlook of Dyer and Singh (1998) lengthens from this theory and advocates that eccentric inter-firm connections are an essential starting place of competitive advantage. As point out, relational rents constitute the very good usual profits mutually fashioned in a collaboration via the pooled eccentric assets, knowledge and competence of companies (Zacharia *et al.*, 2011). The principal impression is that such resources can be circulated across associates in the supply chain (Iyer, 2014). The Resource-Based View (RBV) positions as a structure competent of evaluating the resources from the standpoint of sustainable competitive advantage (Barney, 1991), which helps out scholars and practitioners in valuable evaluation of their resources. The RBV proposes that resources ought to enclose explicit characteristics, which possibly will uphold the delineation of the business that is in front of competition, thus getting hold of a sustainable competitive advantage (Barney, 1991).

### **The Concept of Fuel Management**

Fuel management is an important aspect of fleet operation. Fuel is likened to be the very blood that is in the human body. It facilitates the movement of the vehicle at any point in time. It is crucial to note that while fleet operation and road safety are paramount to service delivery, fuel is a resource that needs to be well managed. Despite the fact that fuel management varies across the organization it nonetheless presents a major cost problem in most setting (Gitahi & Ogollah, 2014). However, implementing formal fuel management programme is effective strategy of making lasting reductions in the cost of fuel for fleet operation. In monitoring vehicle fuel, organizations put fuel control and management designs

in place to monitor, save and optimize fuel related cost. Mostly, information about fuel level and consumption is obtained by connecting GPS tracker to an on-board computer or installing fuel level sensor directly in the fuel tank. This activity generates detailed reports which identify drivers who waste the company's fuel and to identify vehicles that use too much fuel. As such, it is important that operators institute the right measures that promote efficient management of fuel since it has major impact on the competitive advantage of the firm.

Fuel management systems are used to maintain, control and monitor fuel consumption and stock in any type of industry that uses transport, including rail, road, water and air, as a means of business. Fuel management systems are designed to effectively measure and manage the use of fuel within the transportation and construction industries. They are typically used for fleets of vehicles, including railway vehicles and aircraft, as well as any vehicle that requires fuel to operate. They employ various methods and technologies to monitor and track fuel inventories, fuel purchases and fuel dispensed. This information can be then stored in computerized systems and reports generated with data to inform management practices. Online fuel management is provided through the use of web portals to provide detailed fuelling data, usually the back end of 15 an automated fuel management system. This enables consumption control, cost analysis and tax accounting for fuel purchases (Lange, 1992).

There are several types of fuel management systems. Card-based fuel management systems typically track fuel transactions based on a fuelling credit card and the associated driver PIN. Reports can then be generated based on fuel consumption by driver, and data can be directly downloaded. On-site fuel management systems may employ fleet refueling services or bulk fuel tanks at the site. Fuel is tracked as it is pumped into vehicles, and on-site storage levels can be managed. Some fuel companies offer total fuel management systems whereby they provide elements of a card-based system along with on-site fuel delivery and refueling services. Mobile fuel management refers to a fleet of fuel trucks or tankers which provide fuel supply to commercial fleets of trucks or construction equipment. The increasing use of bio-fuel has introduced another challenge in fuel management. With greater water content, there will be a risk of microbial growth – depending on the storage conditions, the fuel quality will deteriorate over time, leading to clogged filters and loss of productivity (Hohn, 2011).

### **The Concept of Sustainable Competitive Advantage**

Competitive advantage emerged in 1985, when Porter discussed the critical types of competitive strategies that a firm can have power over (low-cost or differentiation) in order to realize a long-run sustainable competitive advantage. Competitive advantage passes on as a periphery that consents to a firm to transact with market and environmental forces better than its competitors (Porter, 1985). Competitive advantage is the competence of a firm to build a cast-iron position greater than its competitors (Li *et al.* 2006). This can be realized if the company's value/cost gap is superior to that of her competitors. Tracey *et al.* (1999) asserts that competitive advantage symbolizes the unique capabilities that positions a firm spaced out from its competitors, as a result furnishing them with an upper hand in the marketplace. Competitive advantage is a product of decisive management resolutions (Tracey *et al.*, 1999).

Sustainable competitive advantage conventionally engrosses the choice concerning the markets in which a company would compete, shielding market sector in obviously definite fragments by means of price and product performance qualities. At the moment, however,

competition is contemplated of as a war of movement that depends on looking forward to and swiftly acts in response to shifting market demands. Competitive advantage begins from the establishment of superior capabilities that are weighted to engender customer value and realize cost and/or differentiation advantages, originating market share and profitability performance (Barney, 1991). Sustainable competitive advantage necessitates that firms set up precincts that make replication demanding all the way through persistent speculation to heighten the potency, making this an enduring recurring process. Competitive advantage revolves on a company's aptitude to be a low-cost producer in its industry, or to be incomparable in its sector in some facets that are prevalently treasured by customers (Porter, 1991). Sustainable competitive advantage is perceived as: whether the company has achieved better-quality financial and market benefits (Day & Wensley 1988) and whether it is feasible for competitors to carbon copy the company's competitive stratagem (Barney, 1991; Grant, 1991) and distinguishing competences on which improvements have been established (Grant, 1991; Hall, 1993). A company has competitive advantage when it is putting into practice a value producing strategy not concurrently being put into operation by any existing or prospective competitors, and when these other companies are powerless to copy the advantages of this approach.

The approach for gaining competitive advantage is competitive strategy and it is for the most part put together by aiming at three objectives: cost leadership- firm's method to achieve sustainable cost advantage, differentiation- firm's method to make a distinction of itself from the competitors, and focusing- firm to decide on a segment so that competitive advantage develops out of a spotlight policy. It may be of two categories: cost focus or differentiation focus. Porter declared that a company should not yearn after both cost leadership strategy and differentiation strategy (Porter, 1985). Many investigations recognize the strategic significance of sustainability as an up-and-coming topic in the supply chain management literature and that it is extensively accepted that sustainability cannot be realized by companies in remoteness and have need of the participation of supply chain members (Varsei *et al.*, 2014). A growing number of scholarly writings over the past decade, which are devoted to the field of collaborative exertions in bringing about more sustainable supply chains have accumulated (Beske & Seuring, 2014; Thei Ben *et al.*, 2014; Ramanathan *et al.*, 2014; Van Hoof & Thiell, 2014; Benjaafar *et al.*, 2013; Albino *et al.*, 2012; Green *et al.*, 2012; Nanako & Hirao, 2011; Gold *et al.*, 2010).

The aptitude of a company to achieve and sustain a competitive advantage is directly linked to the company's market pre-eminence, for the reason that it could lend a hand to companies to realize unexpected profit levels. Wheelwright (1989) stated that the decisive distinctiveness that may encompass a well-built competitive advantage is related to the competence of each company to: focus on customers' requirements, boost business accomplishment, be long-lasting, enduring and unmatched by competitors, be based on firms' core competencies and up hold an unremitting enhancement background, promise direction and insight to the entire company. Competitive advantage is a continuous hunt of ventures, for the reason that being in a fortunate situation, presenting inimitable attributes of services and/or products, lifts up and upholds this position in the business sector, making an allowance for the enterprise's relationships with other peers (Barney, 1991; Araujo, Pisano & Shuen, 2003). There are diverse outlooks on how to grow competitive advantage for companies, and this theme has turned out to be a significant research area scholarly inquires categorizes diverge sources of sustainable competitive advantage by emerging from several facets, such as specific core competency (Fiol 2001), global resources (Fahy, 2002), knowledge and competence (Lubit, 2001; Johannessen & Olsen, 2003), marketing innovation (Ren, Xie &



Krabbendam, 2009), positive psychological capital (Toor & Ofori, 2010), etc. A competitive advantage materializes as an essential dynamic in the perception of goods and services value, which should be calculated as fundamentals of competitive advantage. As a result of the importance of sustainable competitive advantage to the long-standing success of companies, the accessible literature takes in hand its content as well as its sources, and the diverse categories of strategies that may help firms realize sustainable competitive advantage (Kim *et al.*, 2012).

### **Organizational Responsiveness**

Responsiveness can be defined as the capability of the supply chain to react resolutely and within an opposite timeframe to customer demands or modifications in the marketplace (Murauskiene, 2014). Supply chain responsiveness is the capacity of swiftness and the extent to which the supply chain can deal with alterations in customer requirements (Holweg, 2005; Prater *et al.*, 2001; Lummus *et al.*, 2003; Duclos *et al.*, 2003). According to Holweg (2005), Capability of firms to respond persistently, in appropriate time to the demand of customers or change in market place to sustain its competitive advantage is known as responsiveness” Responsiveness is a foremost potential of agility, which is imperative in order to perk up good organization in excellence, smooth process stream and cost and thus also highlights the connection with lean supply chain philosophy. Supply chain responsiveness is unbroken information flow and in supply chain flow of goods ought to be at right place at right time. A responsive supply chain is one that is susceptible to convening customer requirements.

### **Organizational Agility**

Agility emanates from incorporating agility drivers (environmental pressures and change that capitulates firm rejoinders), agility capabilities (strategic abilities of responsiveness, competency, quickness, flexibility) and agility providers (developed from the fields of organization, technology, people and innovation) that articulate these capabilities (Zhang & Sharifi, 2001). Agility is a decisive factor for weighing up effectiveness in the case of supply-chain organizations (Hult & Ketchen, 2007). This implies that the agility of a supply chain is an appraisal of how well the interactions engrossed in the process of design, manufacture and delivery of products and services (Hoek, Harrison & Christopher, 2001).

Agility holds close diverse impressions that contain: (1) flexibility, (2) alertness, (3) swiftness, (4) decisiveness and (5) accessibility (Kayii & Okiridu, 2020; Gligor 2013). Flexibility and alertness has, nonetheless, been the mainly dominant impressions linked with agility as it performs the most decisive component in the accomplishment there (Ganguly *et al.*, 2009; Lyons & Ma’aram 2013; Mothade, Toloie-Eshlaghy & Halvachi-Zadeh, 2011). In the same vein, the Procurement Academy (2017) exposed that there are five dimensions of agility: alertness, accessibility, decisiveness, swiftness, and flexibility. Every one dimension symbolizes a capability that firms ought to expand to realize the preferred intensity of agility. Supply chain agility is apparent through a firm’s ability to speedily identify alterations, prospects, and pressures (alertness); swiftly access applicable data (accessibility); formulate unyielding resolutions concerning how to proceed (decisiveness); speedily put into practice those resolutions (swiftness); and amend its variety of supply chain schemes and processes to the point desirable to apply its policy (flexibility).

Agility is a construct in operations and supply chain management literature and putting into practice a concept of agility in the supply chain allows a company to attain superior levels of general organizational agility (Swafford, Ghosh & Murthy, 2006). Supply chain agility has emerged as a leading competitive feature for companies operating in surfacing business

setting. Supply chain agility is a firm's capacity to swiftly fine-tune schemes and processes contained by its supply chain. Kisperska-Moron and de Haan (2011) see supply chain agility as the capability to retort quickly to outer modifications. Agility implies utilizing market knowledge and a virtual enterprise to take advantage of cost-effective openings contained by these unpredictable markets (Cai-feng, 2009; Khan, Bakkappa, Metri & Sahay, 2009). Furthermore, supply chain agility is the ability to retort to unanticipated market modifications and translate these into new business prospects (Ngai, Chau & Chan, 2011). The process began by developing scales for supply chain agility. Supply chain agility constitutes a set of connections of self-regulating firms, which are incorporated and interconnected with the proficient stream of financials, information and material while spotlighting on performance and suppleness. (Supply chain agility is a tactical initiative that embraces service level, flexibility and responsiveness facets (Costantino, Dotoli, Falagario, Fanti & Mangini, 2012; Rahimnia & Moghadasian, 2010). The building blocks and connections amid agility are immature and it is infrequent for two critiques to take up identical descriptions (Conboy, 2009). There is a continuing incoherent use of terms linked to agility (Gligor, 2013). A firm has to be lean ahead of it turning out to be agile, accordingly studies affirm that the agile notion can be perceived as an upgrading from the leanness concept (Jain *et al.*, 2008; van Hock, Harrison & Christopher, 2001; Braunscheidel, 2001). Agile supply chain constitutes structure that incorporates market sensitivity, network integration, virtual integration and process integration whereas, agility is the flourishing investigation of competitive bases (speed, flexibility, innovation reactivity, quality and profitability) through the combination of reconfigurable wherewithal and most excellent practices in a knowledge-rich background to supply customer-driven products and services in a rapid shifting market setting (Yao & Carlson, 2003).

Supply agility envelopes supply chain planning, supply chain purchasing and procurement, supply chain manufacturing, and supply chain logistic and product delivery (Yao & Carlson, 2003; Braunscheidel, 2001). Supply Chain Agility symbolizes how prompt a supply chain acts in response to the transformations in environment, customer preferences, competitive forces etc. It pays no attention to haphazard disparities in implementing daily supply chain processes; it relatively spells out how a firm's supply chain act in responses to adjustments, once business is conscious of outer alterations which can pessimistically/optimistically influence the company in attaining its purposes. It is an evaluation of how firms acclimatize their supply chain to these transformations and then how swift it is capable to realize it.

Swafford *et al.* (2006) brings to light that supply chain agility allows a firm to respond more speedily and efficiently to marketplace instability and other qualms, in that way consenting to the company to launch a finer competitive position. The agile supply chain courses of action are more market sensitive, improved potential of harmonizing supply with the synchronized demand alteration and make swift rejoinder to the companies (Helo, Xiao & Jiao, 2006). Supply chain agility is an evaluation of the supply chain's facility to competently acclimatize to a swiftly shifting competitive environment to convene products and/or services (Swafford *et al.*, 2006). Supply chain agility is an answer to acclimatizing to market discrepancies more proficiently, plummeting inventory, facilitating a swift customer response and combining with suppliers more successfully (Pandey & Garg, 2009).

### **Empirical Review**

Aflabo *et al.* (2020) assessed the impact of fleet management practices on competitive advantage in the Ghanaian transport sector within the Kumasi metropolis. The study was

conducted on a sample of 200 firms with which 178 responses were successfully received representing 89% response rate. Data was collected using questionnaire. Purposive sampling technique was adopted in selecting respondents. The research designs adopted was explanatory and was analyzed using IBM Statistical Packages for Social Sciences version 20. Regression, correlation and cronbach alpha coefficients were used for data analysis. The study revealed that, repair and maintenance, fuel and driver management, and training have positive effect on competitive advantage whiles vehicle tracking have an inverse relationship with competitive advantage. The study recommended that, firms should employ experts in the field of fleet management to give them advice on how to implement fleet management practices to enhance service delivery hence giving them an edge over competitors. Meseker (2018), the main purpose of this study was to investigate the effect of fleet management on fleet efficiency from the perspective of employee the case of world health organization Ethiopia. The study utilized mainly quantitative data analysis techniques. Descriptive statistics such as mean, percentage and frequency tables were used to describe the data. From the total population of 250 employees, a sample of 154 was used by using availability sampling technique. Inferential statistics such as ordered legit model were employed in order to answers the basic question and test the hypothesis respectively. The study incorporate four independent variables in which all of them was measured on a 5-point Likert-Scale, with “1” stands for “Strongly disagree” and “5” stands for “Strongly Agree”. Apparently, mean was used as a measure of central tendency. Furthermore, the data were encoded, processed and analyzed using SPSS.V23. Moreover the results of the study suggest that, operational efficiency of WHO is weak. The study also found a positive correlation among the three of the variables (repair and maintenance, fuel management, vehicle tracking and drivers management) supply chain dimensions. Regarding the correlation, it is possible to conclude that there is a strong and positive relationship among the four variables which this study was relied.

However, it is hypothesized that:

**H<sub>01</sub>:** There is no significant influence of fuel management on organizational responsiveness of oil and gas companies in Rivers State.

**H<sub>02</sub>:** There is no significant influence of fuel management on organizational agility of oil and gas companies in Rivers State.

### **Methodology**

The study adopted a descriptive and cross sectional survey research designs with a casual investigation in the influence of fuel management mechanisms on sustainable competitive advantage within the Nigerian oil and gas sector. According to Akpomi and Kayii (2021), using a descriptive and cross sectional survey research designs, the researchers seek to gather detailed information about a particular group or phenomenon at a specific moment. This design is useful for understanding the current state of affairs, attitudes, behaviors, or characteristics of a population without delving into the dynamics or changes over time. The target population of the study consists of two hundred and ninety-five (295) registered energy companies operating in Rivers State as when the survey was conducted. The sample size of the study was 170 which were drawn using Taro Yamane sampling formula. The respondents of this study were three (3) executive departments each of the 170 oil and gas companies. These are: the Marketing, Production and Customer Service department of oil and gas companies. This summed up to one hundred and forty one (141) respondents. The research instrument was designed in 5-piont Likert scale between strongly disagree and strongly agree. The construct validity was assured by structuring the questionnaire according to the specific



objectives while Cronbach’s Alpha reliability test with a threshold of 0.70 was generated by the use of SPSS to ascertain the reliability of the questionnaire.

**Table 1: Reliability Analysis of Fuel Management on Sustainable Competitive advantage**

S/N	Variables	Number of Items	Cronbach’s Alpha
1.	Fuel Management	3	0.909
2.	Organizational Responsiveness	3	0.728
3.	Organizational Agility	3	0.842

**Data Analysis and Results**

**Table 2: Extent of influence of Fuel Management on Sustainable Competitive Advantage**

S/N	Items	Frequencies / Percentages				
		VLE (1)	LE (2)	ME (3)	HE (4)	VHE (5)
1	The organization is successful in overall fuel management system.	4	5	11	60	120
		2%	2.5%	5.5%	30%	60%
		4	10	33	240	600
2	The organization has set a standard on fuel consumption rate per vehicle.	-	2	55	68	75
		-	1%	27.5%	34%	37.5%
		-	2	165	272	375
3	The organization allocate sufficient budget for fuel cost.	4	8	31	55	102
		2%	4%	15.5%	27.5%	51%
		4	16	93	220	510

The table shows frequencies on fuel management and sustainable competitive advantage, as presented by respondents from the oil and gas companies studied. The organization is successful in overall fuel management system gave 4 (2%) as very low extent 5(2.5%) low extent, 11(5.5%) as moderate extent, 60 (30%) as high extent and 120 (60) as very high extent. On the organization has set a standard on fuel consumption rate per vehicle, very low extent presented no response, low extent has 2 (1%), moderate extent 55 (27.5%), high extent 66 (33%) and very high extent 75 (37.5%). The item on the organization allocate sufficient budget for fuel cost, reported that very low extent gave 4 (2%), while the remaining results were 8(4%) for low extent, 31 (5.5%), for moderate extent, 55 (27.1%) for high extent and 102 (51%) for very high extent. This implies that fuel management feature seriously in oil and gas companies in Rivers State.

**Influence of Fuel Management on Organizational Responsiveness**

**H<sub>01</sub>:** There is no significant influence of fuel management on organizational responsiveness of oil and gas companies in Rivers State.

**H<sub>1</sub>:** There is a significant influence of fuel management on organizational responsiveness of oil and gas companies in Rivers State.

**Table3: Influence of Fuel Management on Organizational Responsiveness**

Model	R	R Square	Adjusted R Square	Std. Error of the estimate
1	.983	.963	.961	2.6751

- a. Predictors: (Constant), Fuel Management  
 b. Criterion: Organizational Responsiveness

**Source: SPSS Window Output, Version 22.0 (based on 2022 field survey data).**

Given that for hypothesis one, the significant is .000 which is less than 0.05; there is a significant, influence of fuel management on organizational responsiveness with the R (Coefficient of Correlation) that there is 98.3% direct relationship between fuel management and organizational responsiveness. R–square value of 96.3% shows that fuel management can influence organizational responsiveness to a high degree. The researcher also used ANOVA to test the hypothesis in this section.

**Table 4: One way ANOVA for the difference in mean between Fuel Management and Organizational Responsiveness**

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	0.63	1	0.63	233.264	.0000
Within Groups	002	333	000		
Total	0.66200	334			

- a. Criterion: Organizational Responsiveness  
 b. Predictor: Fuel Management

**Source: SPSS Window Output, Version 22.0 (based on 2022 field survey data).**

Table 4.4 shows that there is difference in mean between fuel management and organizational responsiveness  $F(dfB,dfw) = F(333,1) = 233.264$ ,  $p < 0.05$ . Significant value is 0.00,  $r(1,333)$ .

**Influence of Fuel Management on Organizational Agility**

**Ho<sub>2</sub>:** There is no significant influence of fuel management on organizational agility of oil and gas companies in Rivers State.

**H<sub>2</sub>:** There is a significant influence of fuel management on organizational agility of oil and gas companies in Rivers State.

**Table 5: Influence of Fuel Management on Organizational Agility**

Model	R	R Square	Adjusted R Square	Std. Error of the estimate
1	.772	.764	.762	45343

- a. Predictors: (Constant), Fuel Management  
 b. Criterion Variable: Organizational Agility

**Source: SPSS Window Output, Version 22.0 (based on 2022 field survey data).**

Given that for hypothesis two, the significant is .000 which is less than 0.05; there is a significant, influence of fuel management on organizational agility with the R (Coefficient of Correlation) that there is 77.2% direct relationship between fuel management and organizational agility. R–square value of 76.4 % shows that fuel management can influence organizational agility to a high degree. The researcher also used ANOVA to test the hypothesis in this section.

**Table 6: One way ANOVA for the difference in mean between Fuel management and Organizational Agility**

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	77.074	1	77.074	374.879	.0000
Within Groups	23.849	333	206		
Total	100.94	334			

- a. Criterion variable: Organizational Agility  
 b. Predictor: Fuel Management

**Source: SPSS Window Output, Version 22.0 (based on 2022 field survey data).**

Table 6 shows that there is difference in mean between fuel management and organizational agility  $F(dfB, dfw) = F(333,1) = 374.879, p < 0.05$ . Significant value is 0.00,  $r(1,333)$ .

### **Discussion of Findings**

The first and second hypotheses wanted to agree on the end product of fuel management on measures of sustainable competitive advantage (organizational responsiveness and organizational agility) using the simple regression analysis. The concept of fuel management as calculated in this study dealt with fuel management systems as designed to effectively measure and manages the use of fuel within the oil and gas industry. The hypotheses were affirmed in the null form, statistically tested and discarded. The alternative hypotheses that there is a significant influence of fuel management on the measures of sustainable competitive advantage (organizational responsiveness and organizational agility) were acknowledged issues adjoining on fuel management as an affirmative driver of measures of sustainable competitive advantage (organizational agility and organizational responsiveness). It becomes apparent that fuel management makes measures of sustainable competitive advantage regimented and accordingly proficient of conveying accurate outcome. From our result, we comprehend that when fuel management is appropriately embraced it rubs on positively on measures of sustainable competitive advantage. Our discovery agrees and supports the findings Aflabo *et al.* (2020) who found that, repair and maintenance, fuel and driver management, and training have positive effect on competitive advantage.

### **Conclusion**

This study assessed the degree to which fuel management affect sustainable competitive advantage of oil and gas companies in Rivers State by means of a quantitative analysis, which makes palpable that in attendance are ample confirmations that the machineries of fuel management investigated by this existing study were enthusiastically linked with sustainable competitive, bestowing a good judgment to proclaim on it variable having the latent to electrify sustainable competitive advantage, and their nonattendance beseeches business reversion in the long run, thus encumbering sustainable competitive advantage. The study therefore, concludes that there is a significant and positive influence of fuel management on sustainable competitive advantage of oil and gas companies in Rivers State of Nigeria.

### **Recommendations**

1. The management of oil and gas companies should scrutinize fuel management mechanism as a procedure that involves incessant modernization of fuel management and guarantee accessibility of oil and gas companies in order to enhance their competitiveness in this 21<sup>st</sup> century business milieu.
2. Management of oil and gas companies should use adequate fuel management to connect to sustainable competitive advantage in their business sector.

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