Strategic Agility and Competitive Advantage of Oil and Gas Marketing Companies: The Moderating Effect of Information Technology Capability and Strategic Foresight

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Abstract: Considering the vital role of strategic agility, information technology capability and strategic foresight in today's global market, organizations in any economy cannot gain industry competitive advantage without agile workforce, information technology capability and strategic foresight. Most oil and gas companies in Nigeria faced competitive disadvantage due to poor strategic agility, information technology incapability and lack of strategic foresight. This study examined the combined moderating effect of information technology capability and strategic foresight on the relationship between strategic agility and competitive advantage in the oil and gas marketing companies in Lagos State, Nigeria. The study employed survey research design. The study population was 515 managers of major oil and gas marketing companies. Total enumeration was used and a structured questionnaire was adapted and validated. The instrument was reliable and valid: Cronbach's alpha coefficients ranged from 0.734 to 0.814, and KMO values were greater than 0.5. 515 copies of questionnaire were distributed and 480 returned useable, giving a response rate of 93.2%. Hierarchical regression method was used for data analysis. Findings revealed that both information technology capability and strategic foresight have significant combined moderating effect on the relationship between strategic agility and competitive advantage in the oil and gas marketing companies (F-change = 34.969, $p<0.05$). The study concluded that information technology capability and strategic foresight moderately affects the relationship between strategic agility and competitive advantage in the oil and gas marketing companies. Therefore, it is recommended that oil and gas marketing companies in Nigeria should utilize their information technology capabilities to derive value from their business operations, sharpen their capability for analysing the drivers, motivations and causalities associated with future opportunities and the alternative strategic decisions necessary to optimally exploit these opportunities, and deepen their engagement of strategic agility initiatives. Limitations of the study and other areas for future research were highlighted.

Keywords: Competitive Advantage Information Technology Capability; Strategic Foresight and Strategic Agility

JEL Classficiation: M31; Z33

1. Introduction

In today's 21st century of globalized and knowledge based economy, no organization can survive and achieve industry competitive advantage without agile workforce, information technological capability and strategic foresight be it developed, emerging and developing economies. As emphasized by Al-Romeedy (2019) that organizations in different industries including oil and gas industry faced a lot of

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challenges in attaining targeted competitive advantage due to rapid and fast fluctuation of visible and invisible forces like technological development, globalization, innovation, creativity, and changing customers' preferences in the business environment. Based on these aforementioned challenges, scholars around the globe have recognized information technological capability and strategic foresight as business strategies to gain competitive advantage (Alavi & Abd-Wahab, 2013; Arokodare, 2020; Arokodare & Asikhia, 2020; Kettunen & Laanti, 2008; Nkuda, 2017; Sherehiy & Karwowski, 2014).

Businesses in developed, emerging and developing economies view competitive advantage as a way of seizing business opportunities and control of larger market share in their choice industry which indicates an edge a business organization has over its rivals or competitors. In this study, competitive advantage was determined by product differentiation, cost advantage, economies of scale, research and development capabilities, market followership, and market niche. However, Nkuda (2017) maintained that without manipulation and effective consideration of suppliers' conditions, human resources and organizational competencies all directed on production cost reduction in the value chain activities on the one hand, and product differentiation is carried out more frequently on the other, achieving competitive advantage may be a mirage. Such situation also makes sustaining a competitive advantage more difficult; a situation which consequently underlines the importance of strategic agility position as well as organisational capabilities. Therefore, this study maintained a stance that unless organizations manipulated, directed and focused on information technology capability and strategic foresight in their competitive decision strategies, they cannot achieve competitive advantage. Though Mavengere (2013) and Arokodare, Asikhia, and Makinde (2020) viewed information technology capability as the ability of the organisation to successfully utilise its information technological resources to derive value while strategic foresight had been conceptualised by Arokodare & Asikhia (2020) as the process of organisation's ability to understand the emerging risks and environmental business opportunities, drivers, motivations, resources, evolution, and causalities that are linked to future opportunities and alternative decisions in order to gain overall performance like competitive advantage.

Considering the important and significant contributions of strategic agility in achieving competitive advantage, studies have argued that strategic agility is the firm's future preparedness and powerful predictors for becoming an outperformer in the industry, for attaining superior competitive advantage and market share growth (Arokodare & Asikhia, 2020; Nkuda, 2017; Oyerinde, Olatunji, & Adewale, 2018). Nevertheless, Arokodare et al. (2020) pointed out that most firms especially organisations in the oil and gas industry in Nigeria have recorded competitive disadvantage due to poor adoption of information technology capability and strategic foresight measures as well as slow agility response to challenges of technological development, globalization, innovation, creativity, and changing customers' preferences. Furthermore, Arokodare and Asikhia (2020) and Oyerinde et al. (2018) emphasized that poor strategic agility to challenges experienced by oil and gas marketing firms in Nigeria have created unstable competitive advantage and poor overall firm performance. Likewise, to the best of the researchers' knowledge, no study specifically in the Nigerian context have investigated the combined moderating effect of information technology capability and strategic foresight on the relationship between strategic agility and competitive advantage among oil and gas marketing companies in Lagos State, Nigeria. This established the empirical gap that this study intended to investigate.

The rest of this article is structured as follows. Section 2 reviews existing literature on the study variables, and develops the theoretical framework and the hypotheses. Section 3 describes the methodology adopted for the study and the model specification. Section 4 reports the main results.

Section 5 presents the article's conclusions and recommendations and section 6 outlines the limitations of the study and suggestions for future studies.

2. Literature Review

The sub-section of this paper covered conceptual definitions, empirical review, gap, hypothesis development and theoretical framework.

2.1. Conceptual Definitions

Strategic Agility

Strategic agility is the ability of the firm to remain flexible in facing new developments, to adjust the company's strategic direction continuously and to develop innovative ways to create value which serves as one of the primary determinants of a firm's success especially in a chaotic or high velocity environment (Weber & Tarba, 2014). Conceptually, Arokodare (2020) viewed strategic agility as the ability of the organisation to sense changes in dynamic, fast-paced environments, and to quickly respond to these changes by seizing market opportunities and maintaining competitiveness through building, combining, enhancing, mobilising and reconfiguring its capabilities and in the process attaining and sustaining superior performance beyond its competition.

Competitive Advantage

Competitive advantage can be defined as whatever value a business provides that motivates its customers (or end users) to purchase its products or services rather than those of its competitors and that poses impediments to imitation by actual or potential direct competitors (Christensen, 2010). It means an edge that a business organization has over its competitors which is assessed based on acceptable performance measures which could be either financial, non-financial or both (Nkuda, 2017).

Information Technology Capability

Information technology capability is the ability of the organisation to successfully utilise its information technology infrastructure and resources to derive value in order to improve its performance (Mavengere, 2013).

Strategic Foresight

Rohrbeck, Thom, and Arnold (2015) conceptually defined strategic foresight as identifying, observing and interpreting factors that induce change, determining possible organisation-specific implications, and triggering appropriate organisational responses.

2.2. Empirical Review, Empirical Gap and Hypothesis Development

There were several studies that have focused on the link between strategic agility and competitive advantage and also employed different moderating variables in determining the relationship between strategic agility measures, competitive advantage and other firm performance measures (Alhadid, 2016; Appelbaum, Calla, Desautels, & Hasan, 2017; Arbussa, Bikfalvi, & Marquès, 2017; Arokodare *et al.*, 2020; Nkuda, 2017; Doz & Kosonen, 2008; Ganguly, Nilchiani, & Farr, 2009; Liang, Kuusisto,

& Kuusisto, 2018; Nejatian, Zarei, Nejati, & Zanjirchi, 2018). These aforementioned empirical studies on the link between strategic agility, competitive advantage and other firm performance measures revealed that strategic agility affected or related with firm competitive advantage and other firm performance indicators.

Furthermore, the studies of AlBar and Hoque (2017), Alis, Jabeen and Nikhitha (2016), Chen and Kamal (2016), Chege, Wang, and Suntu (2019), Macharia, Mike, Ondabu, and Kepha (2015) and Turulja and Bajgorić (2016) have empirically found that IT capability has positive and significant effect on firm performance. Likewise, studies on the link between strategic foresight and firm performance measures such as Baskarada, Shrimpton, Ng, Cox, and Saritas (2016), Bereznoy (2017), Kuosa (2016), Rohrbeck and Kum (2018) and Vecchiato (2015) found that strategic foresight empirically affected firm performance. Rohrbeck and Schwarz (2013) empirically showed that it was possible for strategic foresight to capture incremental value for the firm through an enhanced capacity to perceive change, interpret and respond to change, through influencing other actors, and through an enhanced capacity for organizational learning. Scholars on the link between strategic foresight, information technology capability and firm performance never considered how both strategic foresight and information technological capability moderate the relationship between strategic agility and competitive advantage within and outside Nigeria literature context. Even the study of Arokodare and Asikhia (2020) in Nigeria which conceptually modelled that strategic foresight is a significant element of strategic agility and that its presence can affect the strategic agility-superior organizational performance relationship, recommended an empirical investigation of the moderating effect of strategic foresight on the relationship. The study also failed to conceptually consider the combined moderating effect of information technology capability and strategic foresight on the relationship between strategic agility and firm competitive advantage among oil and gas marketing companies in Nigeria. This indicated that there was a gap in empirical literature both within and outside Nigerian context. Based on this empirical gap, this study hypothesised that:

H_0: Information technology capability and strategic foresight have no significant combined moderating effect on the relationship between strategic agility and competitive advantage of oil and gas marketing companies in Lagos State, Nigeria.

2.3. Theoretical Framework

The theory underpinning this study is the resource-based view. The Resource-Based View (RBV) which was originated by Barney (1986) and Wernerfelt (1984), was based on the fundamental ideas of Penrose (1959) in the theory of the growth of the firm and Rubin (1973) in the theory of the expansion of firms. The RBV states that organisational resources which are valuable, rare, and difficult to duplicate and substitute are a source of competitive advantage, which can improve business performance (Barney, 1991). The RBV of entrepreneurship argues that access to strategic resources in terms of agile workforce, information technology capability and business opportunity foresight by founders is an important predictor of blue ocean opportunity-based entrepreneurship, new venture growth and competitive advantage (Alvarez & Busenitz, 2001; Arokodare & Asikhia, 2020). This theory stresses the importance of agile workforce environment, business foresight and information technology capability as firm strategic resources (Zhou, Zhang, Chen, & Han, 2017). Thus, access to these strategic resources enhances the ability of the firm to detect and act upon discovered opportunities, take risks, and be proactive, thus increasing firm market share competitive advantage

(Davidson & Honing, 2003).

According to Barney (1991), the RBV rests on three assumptions: that firms seek to earn above average returns; that resources are asymmetrically distributed across competing firms; and that differences in resources lead to differences in product or service characteristics that result in variations in firms' competitive advantage. The theory also assumes that individuals are inspired to make maximum use of economic resources available and rational choices that a firm makes which are shaped by economic framework (Barney, 2007). The theory goes beyond the issues of strategy implementation and analysis of organisational processes. These two issues constitute the pre-occupation of most of the earlier works carried out on the strategic implications of the firm's internal environment, which eventually gave rise to strategies (Grant, 2001). The RBV has been criticised because it is static and does not explain how a specific resource can create sustainable competitive advantage while firms do not have enough knowledge about the productivity of each individual asset (Cumberland, 2006). In addition, the concept of firm-specific resources is ambiguous and it is not easy to operationalise measurement items for them (Knott, 2009). The RBV focuses on the role of resources in creating competitive advantage but does not show the relationship between resources and capabilities (Ismail, Rose, Uli, & Abdullah, 2012).

Many scholars (Alvarez & Barney, 2007; Barney & Arikan, 2001; Kumar & Gulati, 2010; Kuncoro & Suriani, 2018; Michael, Storey & Thomas, 2002) have supported the RBV that market competitive advantage requires four characteristics of resources and capabilities as determinants of the sustainability of market competitive advantage. These are durability, valuable and rare, ease of imitation, transferability and substitutability of firm resources like information technology capability (Grant, 2001). Similarly, Arokodare and Asikhia (2020) stressed that for any firm to gain and maintain competitive advantage over its competitors, the firm must possess agile workforce environment, business environmental foresight and information technology capability. Therefore, this study is anchored on the RBV as its underpinning theory.

Considering the empirical gap in literature, a researcher's conceptual model was established and depicted the gap of this study. Also, the researchers' conceptual model in Figure 1 was anchored on Resource Base View (RBV) which shows how firms use strategic agility, information technology capability and strategic foresight as incomparable firm strategic assets and resources to create, achieve and sustain competitive advantage over other competitors. Napitupulu (2018) has emphasised that in today's globalisation and boundaryless trade, firms with sound, efficient and effective strategic agility, information technology capability and strategic foresight do achieve sustainable competitive advantage. Based on the empirical gap in literature and RBV assertion on firm strategic resources and competitive advantage, a researchers' conceptual model was formulated in Figure 1.

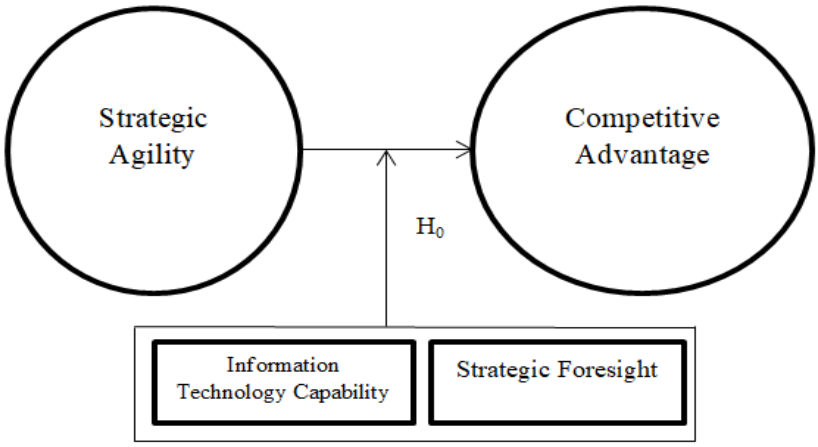

Figure 1. Conceptual Model
Source: Researchers' Conceptual Gap Model (2020)

3. Methodology

This study employed survey research design to gather survey data on study variables to examine the combined moderating effect of information technology capability and strategic foresight on the relationship between strategic agility and competitive advantage of oil and gas marketing companies in Lagos State, Nigeria. The study focused on oil and gas marketing companies in Nigeria such as NNPC Retail Ltd (NRL) and the other major petroleum products marketers like Conoil Plc, 11 Plc, Forte Oil Plc, MRS Oil Nigeria Plc, OVH Energy Marketing Ltd and Total Nigeria Plc. The unit of analysis was the filling station managers with an adjusted population of 515. Total enumeration or census method was adopted because the population of this study was small. This was in line with such studies as Abosede, Fayose, and Eze (2018), Kaiser (2017) and Ogungbangbe (2017) where total enumeration method was used because of small population. In this study, Lagos State was chosen because it hosts the second highest number of retail outlets and also serves as the commercial hub in the country. The State also consumes a significant proportion of the petroleum products locally refined and imported into the country. For example, according to National Bureau of Statistics (2020), in the first quarter of 2018, 18.61% and 27.15% of premium motor spirit and automotive gas oil respectively were consumed in the State. This was 16.31% and 25.89% respectively in the first quarter of 2019. A total of five hundred and fifteen (515) copies of questionnaire were administered, four hundred and eighty (480) copies were returned and considered usable, representing 93.2% response rate, which was satisfactory to make conclusions for the study. Nine (9) of the questionnaire were not considered usable as only some parts had responses. These were eliminated from further analysis while twenty-six (26) of the questionnaire were not returned.

In this study, competitive advantage was the dependent variable, strategic agility served as the independent variable while both information technology capability and strategic foresight served as the moderators. For dependent, independent and moderating variables, a six-point modified Likert-type scale was used to elicit responses from every question in the questionnaire and this covered: Very High (VH) – 6; High (H) – 5; Moderately High (MH) – 4; Moderately Low (ML) – 3; Low (L) – 2; Very Low (VL) – 1. While those items in the questionnaire that failed reliability and validity test were removed from the questionnaire instrument and could not be used as part of items to measure study variable. The questionnaire instrument used for this study have pass through face validity, content

validity, construct validity and reliability internal consistency test (See Table 1) hence, the questionnaire instrument had been statistically certified, correctly and consistently measure the study variables.

The Validity and Reliability Result

Table 1. KMO, Bartlett's Test of Sphericity and Reliability Result

Variables	Number of Questions	Kaiser-Meyer-Olkin (KMO)	Bartlett test of Sphericity	Cronbach's Alpha	Average Variance Explained (AVE)
Strategic Agility	6	0.643	0.002	0.734	0.832
Competitive Advantage	7	0.756	0.000	0.783	0.720
Information Technology Capability	5	0.716	0.000	0.805	0.786
Strategic Foresight	7	0.526	0.006	0.814	0.723

Source: Researchers' Computation (2020)

The questionnaire used for the study variables were tested for validity and reliability. The result in Table 1, shows that the KMO is greater than 0.5. It means that the questions actually measured the variables in the study. The result of the Bartlett test of Sphericity at 0.000 which is less than 5%, indicate that there was a high significant relationship among variables in measuring the variables under study. In this study, the KMO test was greater than 5% and Bartlett test of Sphericity result was less than 5% indicating that statements that comprised the research instruments of each variable actually measured what were intended to be measured. The result of the KMO and Bartlett test of Sphericity are shown in Table 1. The construct validity of the research instrument was further established through confirmatory factor analysis. Average Variance Extracted (AVE) greater than 0.5 was used as an additional evidence of construct validity of all variables in the research instrument. The result of the Cronbach's alpha was greater than 0.70 for each of the variables which indicated that the items used to measure the study variables were reliable. To test whether multicollinearity would pose a serious challenge to the study, tests based on Variance Inflation Factor (VIF) and their reciprocal tolerances were conducted (See Table 2). Likewise, hierarchical regression method of analysis was employed to examine that information technology capability and strategic foresight have no significant combined moderating effect on the relationship between strategic agility and competitive advantage of oil and gas marketing companies in Lagos State, Nigeria.

Model Specification

The model was denoted based on the hypothesis of the study and stated as;

Y = Dependent Variable = Competitive Advantage (CA)

X = Independent Variable = Strategic Agility (SA)

Z_1 = Moderating Variable One = Information Technology Capability (ITC)

Z_2 = Moderating Variable Two = Strategic Foresight (SF)

The model formulated for the study was functionally written based on the objective and hypothesis of the study:

$Y=f(XZ_1Z_2)$

$Y = \beta_0 + \beta_i X + \beta_z Z_1 Z_2 + \beta_{iz} X Z_1 Z_2 + \varepsilon_i$

$CA = \beta_0 + \beta_i SA + \beta_z ITC*SF + \beta_{iz} SA*(ITC*SF) + \varepsilon_i$---------- **Hypothesis**

If $\beta_{iz} \neq 0$ & $p \leq 0.05$, Reject null hypotheses

β_0 = the constant term; β_i= the regression coefficient for SA; β_z= the regression coefficient for the multiplied two moderators (ITC*SF); while β_{iz} is the regression coefficient for combined moderators multiplied with independent variable (SA) and lastly, ε_i= Error Term.

4. Results and Discussions

This sub-section focused on multicollinearity test and hierarchical regression method of analysis.

Multicollinearity Test

Table 2. Multicollinearity Test Results

Variables	Tolerance	VIF	Remark
Strategic Agility	0.521	1.918	No multicollinearity
Strategic Foresight	0.619	1.615	No multicollinearity
Information Technology Capability	0.560	1.785	No multicollinearity

Dependent Variable. Competitive Advantage

Source: Survey Data (2020)

Table 2 shows that the variables have a VIF that is less than 10 and tolerance value more than 0.1 ruling out the possibility of multicollinearity. All the predictor variables had a VIF of less than 10. The explanatory variables were not highly correlated and could not pose a serious problem. The data was thus suitable for hypotheses testing using hierarchical regression analysis.

Table 3a. Model Summary for Combined Moderating Effect of Information Technology Capability and Strategic Foresight on the Relationship between Strategic Agility and Competitive Advantage

(a)Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	0.781[a]	0.610	0.609	0.62541254	0.610	746.623	1	478	0.000
2	0.805[b]	0.647	0.645	0.59561058	0.038	25.516	2	476	0.000
3	0.820[c]	0.672	0.669	0.57543200	0.024	34.969	1	475	0.000
a. Predictors: (Constant), Strategic Agility									
b. Predictors: (Constant), Strategic Agility, Information Technology Capability, Strategic Foresight									
c. Predictors: (Constant), Strategic Agility, Information Technology Capability, Strategic Foresight, Strategic Agility x Information Technology Capability x Strategic Foresight									
d. Dependent Variable: Competitive Advantage									

(b)ANOVA[a]						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	292.035	1	292.035	746.623	0.000[b]
	Residual	186.965	478	0.391		
	Total	479.000	479			
2	Regression	310.138	3	103.379	291.413	0.000[c]
	Residual	168.862	476	0.355		
	Total	479.000	479			
3	Regression	321.717	4	80.429	242.899	0.000[d]

	Residual	157.283	475	0.331		
	Total	479.000	479			
a. Dependent Variable: Competitive Advantage						
b. Predictors: (Constant), Strategic Agility						
c. Predictors: (Constant), Strategic Agility, Information Technology Capability, Strategic Foresight						
d. Predictors: (Constant), Strategic Agility, Information Technology Capability, Strategic Foresight, Strategic Agility x Information Technology Capability x Strategic Foresight						

(c)Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.606E-15	.029		.000	1.000
	Strategic Agility	.781	.029	.781	27.324	.000
2	(Constant)	1.559E-15	.027		.000	1.000
	Strategic Agility	0.571	.040	.571	14.273	.000
	Information Technology Capability	0.016	.003	.156	4.592	.000
	Strategic Foresight	0.180	.036	.180	5.014	.000
3	(Constant)	0.013	.026		.500	.618
	Strategic Agility	0.613	.039	.613	15.596	.000
	Information Technology Capability	0.022	.003	.219	6.345	.000
	Strategic Foresight	0.218	.035	.218	6.181	.000
	Strategic Agility x Information Technology Capability x Strategic Foresight	0.076	.013	.197	6.333	.000

a. Dependent variable: Competitive Advantage

Source: Researchers' Results (2020)

Tables 3(a-c) present hierarchical multiple regression results for the moderating effect of combined of Information Technology Capability x Strategic Foresight on the relationship between strategic agility and competitive advantage. Results in Table 3a summarized the output for the analysis if moderation effect is not considered. In Model 1, the independent variable was strategic agility and the results (Table 3a) reveals that R = 0.781, R^2 = 0.610 and [F (1, 478) = 746.623, p = .0001]. The value of coefficient of determination, R^2 indicates that 61% of the variance in the competitive advantage of selected oil and gas marketing companies in Lagos State was accounted for by strategic agility. The remaining 39% of the total variation in competitive advantage are explained by factors not included in the model. The adjusted R-squared value was found to be 0.609. The explained variation in the relationship was found to be significant ($p<0.05$). The regression coefficients section in Table 3a shows that the coefficient was not only positive but also significant ($p<0.05$).

In the second step (model 2), a multiple regression involving strategic agility, information technology capability and strategic foresight were introduced in the model as predictor variables and the results indicate that adjusted R-squared is 0.647 implying that the regression model explains 64.7% of changes in competitive advantage while the rest are attributed to variables not included in the regression model. The F-statistics is 291.413 with a corresponding p-value of 0.000 ($p< 0.05$) indicating that the influence is significant. Strategic agility has a coefficient of 0.571; t-statistic of 14.273 and a p-value of 0.000 which implies that a unit change in strategic agility would result in a 0.571 unit change in competitive advantage of selected oil and gas marketing companies. The beta

coefficient for information technology capability is 0.016; t-statistic of 4.592 and a corresponding p-value of 0.000 ($p<0.05$). This implies that information technology capability has significant positive influence on competitive advantage of selected oil and gas marketing companies in Lagos State, Nigeria, and that a unit change in information technology capability would result in a 0.156 unit increase in competitive advantage of selected oil and gas marketing companies. The beta coefficient for strategic foresight is 0.180; t-statistic of 5.014 and a corresponding p-value of 0.004 ($p<0.05$). This indicates that strategic foresight also has positive and significant influence on the competitive advantage of selected oil and gas marketing companies in Lagos State, Nigeria. The result implies that a unit change in strategic foresight would result in 0.180 unit increase in competitive advantage of selected oil and gas marketing companies.

The third step involved the introduction of interaction term among strategic agility, information technology capability and strategic foresight using regression model. Result in Table 3c indicates that the R square change ($R^2 \Delta$) is 0.024, and F-change (F Δ) of 34.969 with a corresponding p-value of 0.000 implying that the interaction of interaction of strategic agility, information technology capability and strategic foresight have significant effect on competitive advantage of selected oil and gas marketing companies in Lagos State, Nigeria ($p<0.05$). The results show the beta coefficients of strategic agility ($\beta = 0.613$), information technology capability ($\beta = 0.219$) and strategic foresight ($\beta = 0.218$) that is for every unit increase in strategic agility, information technology capability and strategic foresight, competitive advantage of selected oil and gas marketing companies increased (changed) by 0.613, as well as increase by 0.219 and 0.218 respectively. Furthermore, the interaction term of strategic agility, information technology capability and strategic foresight (Strategic Agility x Information Technology Capability x Strategic Foresight) has a beta coefficient of .197 ($\beta = 0.197$, $p<0.05$) and a corresponding P-value = 0.000 which implies that the relationship is statistically significant and positive ($p<0.05$). This implies that a unit increase in interaction term of strategic agility, information technology capability and strategic foresight increased competitive advantage by 0.197. The increase in competitive advantage is likely to be caused by the effective and efficient employment of both information technology capability and strategic foresight. The results, however, suggest that the combination of information technology capability and strategic foresight have statistically significant combined moderating effect on the relationship between strategic agility and competitive advantage of selected oil and gas marketing companies in Lagos State, Nigeria. Based on this result, the null hypothesis (H_0) which states that information technology capability and strategic foresight have no significant combined moderating effects on the relationship between strategic agility and competitive advantage of selected oil and gas marketing companies in Lagos State, Nigeria was rejected.

Specifically, the findings of this study to the effect that information technology capability and strategic foresight have significant combined moderating effect on the relationship between strategic agility and competitive advantage is in congruent with the fundamental assumptions and postulations of the resource-based view (RBV), the theory that underpinned the study. Moderating variable refers to a variable that can strengthen, diminish, negate, or otherwise alter the association between independent and dependent variables; it can also change the direction of this relationship (Hayes, 2017). The RBV postulates that an organization's visible and invisible resources in terms of tangible and intangible assets that are rare, valuable, and difficult to duplicate and substitute do enhance organizational competitive advantage. Organizational information technology capability, workforce agility as well as strategic foresight constitute a mix of tangible and intangible resources of the firm and do improve firm competitive advantage (Alvarez & Busenitz, 2001; Arokodare, 2020; Arokodare & Asikhia,

2020; Barney, 1991; Gonzalez & Dopico, 2017; Kamasak, 2017; Madhani, 2012). Gonzalaz and Dopico (2017) empirically predicted the importance of intangible assets in achieving results, both in terms of competition as well as purely economic; and Kamasak (2017) specifically revealed that intangible resources and capabilities contributed more greatly to firm performance compared to tangible resources. As shown in the statistical analysis above, the two moderating variables of information technology capability and strategic foresight did significantly strengthen the relationship between strategic agility and competitive advantage of the oil and gas marketing companies.

5. Conclusion and Recommendations

This study concluded that both information technology capability and strategic foresight did moderate the relationship between strategic agility and competitive advantage of oil and gas marketing companies in Lagos State, Nigeria. Therefore, this study recommended that:

i. oil and gas marketing companies should embrace information technology capability and strategic foresight practices as these will enhance their competitive advantage over their competitors through engagement of strategic agility initiatives;

ii. oil and gas marketing firms should utilize their information technology capabilities to derive value from their business operations;

iii. these firms should also deepen their engagement of strategic agility initiatives by properly understanding the risks and opportunities emerging from their business environment;

iv. for an enhanced capacity to perceive change, interpret and respond to change, these firms and their managers must engage in strategic foresight practices in order to put them ahead of their competitors and

v. to sharpen their preparedness for strategic agility initiatives, these firms should be capable of analysing the drivers, motivations and causalities associated with the future opportunities and the alternative strategic decisions necessary to optimally exploit these opportunities.

6. Limitations and Suggestions for Further Study

As usual with studies of this nature, there are certain limitations inherent in the study which must be taken cognisant of. First, the scope of the study was limited to the major oil and gas marketing companies in Lagos State, Nigeria. Specifically, the independent marketers of petroleum products were excluded from the sample because they operate a different business model from the major marketers. Second, the population of 515 stations used in the study was small and thus a larger sample will enhance the coverage of the study to other areas of the sector. Thirdly, the oil and gas marketing sector belong to the downstream end of the industry. Thus, the upstream (exploration and production) sector was excluded from the study scope and therefore the findings cannot be generalised for the oil and gas industry as a whole. Fourth, the peculiarities of the oil and gas marketing sector also make the study findings not to be generalisable to other crucial sectors of the economy such as industrial sector, consumer goods and services sector, and the financial services sector.

Further studies should: (i) investigate the combined effect of information technology capability and strategic foresight on the relationship between strategic agility and competitive advantage of other

industries in Nigeria, like food and beverages, financial services and telecommunication as these industries are in the critical sectors of Nigeria's economy and are pivotal to its growth; (ii) calibrate the oil and gas marketing sector into its major segments (NNPC retail outlets, major marketers and independent marketers) and investigate how the study variables apply to them for a comparative analysis; (iii) examine how and to what extent the study moderating variables affect the relationship between strategic agility and competitive advantage in the upstream oil and gas sector and compare with the results of this study.

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Appendix

Request for Permission to Participate in a Research

Dear Sir/Madam,

I kindly request your participation in a research study.

The title of the research is: **Strategic Agility and Competitive Advantage of Oil and Gas Marketing Companies: The Moderating Effect of Information Technology Capability and Strategic Foresight**

This study aims to examine the combined moderating effect of information technology capability and strategic foresight on the relationship between strategic agility and competitive advantage of the oil and gas marketing companies in Lagos State, Nigeria. We would value your opinion and consider your participation significant to the success of this study.

If you agree to participate, you will be required to complete a three-section questionnaire titled **Strategic Agility and Competitive Advantage of Oil and Gas Marketing Companies: The Moderating Effect of Information Technology Capability and Strategic Foresight**. The exercise will take approximately twenty minutes of your time. Your participation in this research study is completely voluntary.

Any and all personal and private information, which may be regarded as sensitive, including but not limited to names and locations will be treated with utmost confidentiality and anonymity throughout and subsequent to the study. Any findings pertaining to this research study will be made available for your perusal should you wish to examine them.

Your approval, as requested herein, would be appreciated. Should you have any questions and/or concerns in this regard, please do not hesitate to contact me. Should you be willing to be of assistance by providing the requested consent kindly complete and sign the attached Consent Form and return to the writer hereof at your earliest convenience.

Thanking you in advance for your kind assistance.

Please also find attached hereto a copy of this letter and Consent Form for your record keeping purposes.

Yours faithfully,

QUESTIONNAIRE

I, _____ herewith give my consent to participate in the study. I have read the letter and understood my rights with regard to participating in the research.

_____ _____

Respondent's Signature **Date**

Strategic Agility and Competitive Advantage of Oil and Gas Marketing Companies: The Moderating Effect of Information Technology Capability and Strategic Foresight.

DEMOGRAPHIC INFORMATION

Instruction: Please answer the statement below by ticking (√) the option which best describes your agreement.

Gender : [ ] Male [ ] Female

Age: [ ] 18-28years [ ] 29-39years [ ] 40-49years [ ] 50-60years

Marital Status: [ ] Single [ ] Married [ ] Others (Please Specify)

Nationality: [ ] Nigerian [ ] Foreigner

Highest Educational Level: [ ] WASC/OND [ ] BA/BSc/HND [ ] MA/MSc/MPhil [ ] PhD

Professional Qualifications: [ ] Please Specify

Current Management Level: [ ] Top [ ] Middle [ ] Others (Please Specify)

Current Function: [ ] Filling Station Manager [ ] Head, Finance

[ ] Head, Planning [ ] Others (Please Specify)

Length of Service:[ ] 0- 5years [ ] 6–10years [ ] 11–15years [ ] 16-20 years [ ] 21–25years [ ] 26–30years [ ] 31-35 years

Using the scale below, please answer the statement below by ticking the options that best satisfies your response to the following statements as it relates with your experiences and practices in the organisation. VH-Very High=6, H-High=5, MH-Moderately High=4, ML-Moderately Low=3, L-Low=2, VL-Very Low=1. The scaling is in ordinal form where 6points implies highest score and 1point implies lowest score.

Strategic Agility – Independent Variable (X)							
How will you rate your oil and gas firm in the following areas of Strategic Agility?		**VH**	**H**	**MH**	**ML**	**L**	**VL**
1	Strategic insight	6	5	4	3	2	1
2	Internal response orientation	6	5	4	3	2	1
3	External response orientation	6	5	4	3	2	1
4	Human resource capability	6	5	4	3	2	1
5	Dynamic investment capacity	6	5	4	3	2	1
6	Aggressive market penetration	6	5	4	3	2	1
Competitive Advantage – Dependent Variable (Y)							
	How will you rate your oil and firm in these areas of Competition?	**VH**	**H**	**MH**	**ML**	**L**	**VL**
1	Strategic alliance	6	5	4	3	2	1
2	Cost leadership	6	5	4	3	2	1
3	Product differentiation	6	5	4	3	2	1
4	Production of unique product	6	5	4	3	2	1
5	Research and development capabilities	6	5	4	3	2	1

6	Market followership	6	5	4	3	2	1
7	Market niche	6	5	4	3	2	1
	Information Technology Capability- Moderator (Z_1)						
How will you rate your oil and gas firm in these areas Information Technology Capability?		**VH**	**H**	**MH**	**ML**	**L**	**VL**
1	Exploration of new technology paradigms	6	5	4	3	2	1
2	Digitized processes	6	5	4	3	2	1
3	Pursuit of new technology strategies	6	5	4	3	2	1
4	Business intelligence technology	6	5	4	3	2	1
5	Deployment of IT infrastructure	6	5	4	3	2	1
	Strategic Foresight- (Z_2)						
How will you rate your oil and gas firm in the areas of Strategic Business Foresight?		**VH**	**H**	**MH**	**ML**	**L**	**VL**
1	Predict external pressure	6	5	4	3	2	1
2	Detect future changes	6	5	4	3	2	1
3	Clarity of vision	6	5	4	3	2	1
4	Choosing strategic targets	6	5	4	3	2	1
5	Future industry knowledge	6	5	4	3	2	1
6	Choosing strategic objectives	6	5	4	3	2	1
7	Detect future industry risk	6	5	4	3	2	1

THANK YOU