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Extent of Suppliers Bargaining Power Relative to Performance of Oil Industry in South Sudan

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Abstract:
The purpose of this study was to examine the extent of bargaining power of suppliers on performance of oil industry in South Sudan. The specific research question was: What extent of bargaining power do suppliers have relative to performance of oil industry in South Sudan? The research design employed was descriptive research and analytic research with questionnaire as the main data collection instrument. All oil firms operating in South Sudan were involved in the study with middle and top managers as respondents. A total of 84 self-administered questionnaires were distributed but only 66 were filled and returned representing a 78.6% response rate. The study found out, the bargaining power of suppliers have positive significant effects on performance of the oil industry in South Sudan. This research recommends that the government should effectively develop oil investment policy and implement it as to guard against monopoly of oil industry by few suppliers which is against the normal market forces. As an emerging market with high oil capacity, monopolization will destroy oil industry in South Sudan hence the need for proper control from the government.

Keywords: *bargaining power of suppliers, performance, oil industry, South Sudan*

1. Introduction

Globally, the number of industries in the oil sector differs with oil production. According to Grünig and Best (2007), in 25 EU members states, there were 839 firms involved in oil and gas and incidental services. Out of this, 322 companies were involved in direct extraction with 106 in UK, 104 in France and less than ten in other countries. Majority of companies provide incidental services to exploration of oil and gas, 517; 286 in UK, 60 in Netherlands, and 25 each in France and Germany. Such multinationals involved in extraction, transport, refinement to wholesalers and retail trade are ExxonMobil, Royal Dutch Shell or BP, Total, TexacoChevron or TotalFinaElf. Majority of oil industries were in UK and France where the industry concentration ratio is low. Based on this statistics, it's clear that the oil industry globally is controlled by few firms creating monopoly.

A report by African Development Bank and Africa Union (2009) shows that the capacity of oil-rich African countries has not been fully exploited. Africa had oil reserves of 132.4 billion barrels at the end of 2011, which was an increase of 154% compared to the 1980 figure of 53.4 billion barrels (Brown, 2013). PWC (2014) revealed Africa produces nearly nine million barrels of crude oil per day with more than 84% from Nigeria, Libya, Algeria, Egypt and Angola. Though a large production, researchers argue that this underestimates Africa performance as it does not include current and future unexploited 'proven reserves' in Mauritania basin, Uganda, Kenya, South Sudan, Congo and Tanzania (Brown, 2013; PWC, 2014; African Development Bank and Africa Union, 2009). Further, in 2013 alone, six of the top 10 global discoveries by size were made in Africa (PWC, 2014).

In a bid to increase performance and tap the large oil discoveries in Africa, there has been competition on companies investing in the oil industry in Africa. Major companies mentioned are Sonangol (Angola), Sonatrach (Algeria), Statoil (Norway), ONGC (India), PetroSA (Ghana), CNPC and Sinopec (China), Statoil, Gazprom (Russia) and CNOOC (China) having bid recently in Tanzanian (PWC, 2014; African Development Bank and Africa Union, 2009). With majority of these firms being multinational companies, they are involved in extraction, transport, processing and refining of crude oil as well as in wholesale and retail (PWC, 2012).

Though African nations are rich in the oil capacity and exploring the increase in production, most countries are still underdeveloped. It is the view of the researcher that without any proper literature on competition that informs strategic plan and management, such nations continue to languish in poverty as the product of oil industry is not seen as what happens in Nigeria. Nigeria has been exploiting oil resources for the last 55years but has 400% lower physical capital development due to a number of factors including low power of buyers and minimal involvement of local suppliers (Africa Economic Outlook, 2012). This lowers the extraction rate and in the long run, the performance of oil industries due to monopoly by few farms in the industry.

This monopoly of suppliers locks out majority of middle and small size suppliers hence lower competition which affects performance of oil industries in comparison to free market economy. African countries are yet to benefit from such business. For example, Nigeria which has been exploiting oil resources for the last 55years has 400% lower physical capital development due to a number of factors including low power of buyers and minimal involvement of local suppliers. This lowers the extraction rate and in the long run, the performance of oil industries due to monopoly by few farms in the industry.

When the suppliers have high power, the raw materials can be monopolized. Such a situation forces the industry to abide by the condition of the supplier which lowers the general industry performance. When the suppliers' power is competitive based on market forces, industry performance will be competitive as well. However, imbalance of supplier causes poor performance due to monopoly of favored industries that will intern, control the market. Similarly, with a low bargaining power of the buyers, suppliers are left to monopolize the oil industry (Porter, 2008).

According to the Oil and Gas in African report by Kantai (2004) titled young nation divided, South Sudans' oil reservoir coverage is largely in the Upper Nile and all of Unity State. Major investors in the oil industry includes Indian firm ONGC Videsh which holds equity with Greater Pioneer Operating Company (GPOC) and SUDD petroleum operating company (SPOC). Also, China National Petroleum Corporation (CNPC) and Malaysian firm Petronas are the largest investors in block 3 and block 7. Despite the monopoly, oil fields in South Sudan are ravaged by war between the government and the rebel groups which is majorly two tribes; Dinka and Nuer groups. This continuously affects oil exploration, production and attraction of other investors.

2. Literature Review

According to Porter a supplier group is powerful if the following conditions apply: dominates a few companies and is more concentrated than the industry it sells to; not obliged to contend with other substitute products for sale to the industry; the industry is not an important customer of the supplier group; the supplier's product is an important input to the buyer's business; the supplier group's products are differentiated or it has built up switching costs; and the supplier group poses a credible threat of forward integration (Grundy, 2003; Lopez-Claros et *al.*, 2008; Porter,2013).

When industry suppliers have significant power, it can directly affect profitability, market share and customer service. This can be reflected through the product prices, quality and quantity in the market. This reduces the power of the buyers as they are being controlled by the suppliers. A stronger supplier can increase profit by increasing the selling price of the product as the buyers with lower power will abide by the new cost. This may lead to loss of customers to available substitute products. Similarly, the supplier may reduce the cost of production and hence increases the profit level (Porter, 2008; Lopez-Claros et *al.*, 2008). Shortage of products supplied also affects the profit level of the supplier, the company efficiency and customer satisfaction as this leads to increase in price due to high demand. Similarly, when the supplier compromises on quality of the product produced in order to bring down the cost of production, it may create a negative impact with the end consumers and affect customer satisfaction. Such customers may complain, return the product or turn to alternate products hence reduce profit of the product (CGMA, 2013).

A large supplier dominates the market due to monopoly and can drive other companies outside the business due to economies of scale (Porter, 2008; PWC, 2014). If the product is fully manufactured by a supplier, they may also choose to sell it directly to the customer, often at a lower price, while still making profit and expanding the market share. Such also creates a strong product design which will highly be consumed by consumer hence high profit and expansion of market share while satisfying the customers. Oppositely, when products are readily available from many suppliers at the different market places, the profit of the firm reduces as buyers' power increases due to availability of various choices. Buyers can choose from different market place. Also, this increases customer satisfaction as customers choose from markets that they like while oil firms increase their internal efficiencies to satisfy the customers.

When suppliers provide items that account for a sizeable fraction of the industry products, the forces of market will determine the profitability of the oil firm due to the balance of power of buyer and supplier at equilibrium (CGMA, 2013). Unlike this market where many suppliers exist, the presence of few large suppliers in the industry who dominate the market share of the oil industry increases monopoly hence the presence of few suppliers who make large profit in an industry (Lopez-Claros et *al.*, 2008).

According to Porter (2008), monopoly increases the market share and profit of the firm but indirectly affects the customer satisfaction and internal processes of the industries. This is similar to economies of scale and cost of entry. According to the micro-economics principles, if a firm has monopoly power then it has little competition, therefore demand will be more inelastic. This enables the firm to increase profits by increasing the price (CGMA, 2013; Lopez-Claros et *al.*, 2008).

Major companies such as ExxonMobil, Royal Dutch Shell, BP, Total, TexacoChevron or TotalFinaElf control the suppliers' power in labor production by supplying, refining and distributing oil in their own. Unfortunately, these multi-national companies control the production and their own supply hence lower monopoly in the market which limits other suppliers and companies. This have leverage the companies over consumers making super-normal profit (Brown, 2013; Grünig & Best, 2007). Consumers have on the other hand to choose few companies that determine the performance of oil industry.

In Kenya, only Tullow has been allowed to explore oil production which gives it a competitive power on extraction, refinery, transportation and even selling. PWC (2012) report indicates that, investors in oil industry in Africa are on the increase though they are still few who control the market. Porter (2008) clearly outlined monopoly in the market as a factor that increases suppliers' power and affects competition.

Other factors that increases suppliers power that affect competition in the market according to Porter are: supplier is not obliged to contend with other substitute products for sale to the industry, the industry is not an important customer of the supplier group, the supplier's product is an important input to the buyer's business, the supplier group's products are differentiated or it has built up switching costs and the supplier group poses a credible threat of forward integration (Grundy, 2003; Lopez-Claros et *al.*, 2008; Porter, 2013). Further to these studies, suppliers are also known as sellers. They supply inputs to the producers of goods. Their bargaining power can be exerted in an industry by threatening to raise prices or reduce the quality of the goods and/or services they supply. An organization must have a good relationship with its suppliers in order to enhance its operations. It must ensure that it is supplied with the right quantity, right quality, at the right price, at the right time and at the place the inputs are expected to be delivered. Operators in logistics, and in Purchasing & Supply discipline, popularly call these rights the "Rights" of Purchasing and Supply (David, 2009; Porter, 2013).

When there is dominance of the supply group by a few companies and the supply group is more concentrated than the industry it sells to, the supplier group can exert its strong power and affect the competitiveness in the industry as a result. If suppliers sell to more fragmented buyers, they are able to exert a lot of influence in regard to business terms such as prices, discounts, quality, and can also the quantity they may determine from time to time (Porter, 2008; CGMA, 2013). Also, where there is no obligation to contend with other substitute products for sale to the industry the suppliers have considerable power. If there are competing substitutes then the suppliers' power is minimal.

When suppliers do business with several industries and a particular industry does not buy substantial inputs or supplies from the suppliers, the particular industry is not an important customer of the supplier group (Porter, Lorsch, and Nohria, 2004). In this case, the supplier group will exert considerable power in negotiating prices, quality and other terms with the particular industry. However, if the industry is an important customer of the supplier group, suppliers' fortunes will be closely tied to the success of the industry and they will be amenable to giving the industry good terms including good pricing and high quality.

When the supplier's product is an important input to the buyer's business, then the supplier has considerable power. The buyer has to endeavor to maintain a good relationship with the supplier as the buyer's manufacturing activities are closely tied to a reliable supply regime (CGMA, 2013). The situation is much more pronounced in the case where the input is not storable, thus forcing the buyer to build up stocks of inventory or engage in strategies such as "Just-In-Time" supply to ensure regular supply as per the manufacturing schedules and plans (Porter, Lorsch, and Nohria, 2004).

In situations where the supplier group's products are differentiated or it has built up switching costs the options of the buyer to play one supplier against another are minimized quite considerably or completely cut off. If the supplier faces switching costs, the effect is the reverse. Under the conditions where the supplier group poses a credible threat of forward integration the industry's ability to improve on the purchasing and supply terms is minimized and remains under check until the situation changes (Porter, Lorsch, and Nohria, 2004). Suppliers power was tested by perception of each measure of bargaining power, the existing relationship between bargaining power and performance and lastly the prediction of the bargaining power on performance.

3. Methodology

This study employed the two approaches of design; descriptive and analytic research. Descriptive research aims at describing phenomena or narrating how various behavior and events occur. On the other hand, the analytic research seeks to establish relationships among phenomena or variables by asking "what" and "why" certain behaviors occur and "how" these behaviors relate to other types of behaviors and other variables.

Using census method, all 21 oil firms operating in South Sudan constituted the population of study. These companies were identified physically and counter checked with the Chamber of Commerce and Industry for authenticity. All the middle and top managers of these companies were involved in the survey. Before data collection, pre-test was conducted for validity and reliability test. Reliability refers to the consistency and stability of scores obtained from an instrument, (Creswell, 2005; Kothari, 2011). Structured questionnaire was used to obtain information with Cronbach's reliability alpha shows an internal consistency of .858 (85.8%) which is highly reliable. Of the 84 self-administered questionnaires distributed to the middle and top management of all oil firms operating in South Sudan, 66 were filled and returned representing a 78.6% response rate.

Cleaned data was analyzed thematically using multi-linear regression modeling. According to Kothari, (2011), Multi-linear model identifies relationship of variables based on clustered dependent variables. Basic descriptive analysis was performed for demographic data and beginning data followed by correlation to identify background and bargaining power of suppliers. Lastly, Regression tested the magnitude of change of oil performance in relation to power of suppliers.

The regression model used was:

$$\text{Performance} = \beta_0 + \beta_1 \times \text{power of suppliers} + \varepsilon$$

4. Findings

4.1. Background Information

Oil firms operating in South Sudan has different ownership; 36.4% were government owned followed by 25.8% that were internationally owned, 21.2% as joint venture and 16.7% were locally owned.More than half of these firms (57.6%) operating in South Sudan have no branches outside South Sudan while the remaining 42.4% have branches outside South Sudan. A further analysis on branches of oil firms in South Sudan based on ownership shows that, all (100%) locally owned firms have branches only in South Sudan while all (100%) internationally owned firms have branches outside South Sudan. As for the government owned firms, 12.5% have branches outside South Sudan with majority (87.5%) operates only in South Sudan. Among the Oil firms owned as joint ventures, 57.1% have branches outside South Sudan while 42.9% operates only in South Sudan. These values are statistically significant at (P=.0005, X^2= 41.217, df (3)) meaning, there is a positive strong relationship (X^2= 41.217) between ownership and oil firms with branches outside South Sudan; all locally owned firms have branches only in South Sudan; all internationally owned firms have branches outside South Sudan; more than three quota of government owned firms have branches in South Sudan while there is equal distribution for joint venture firms.

		Branches outside South Sudan		**Total**
		No	Yes	
Locally owned	Count	11	0	11
	% within Ownership of the firm	100.0%	0.0%	100.0%
	% of Total	16.7%	0.0%	16.7%
Internationally owned	Count	0	17	17
	% within Ownership of the firm	0.0%	100.0%	100.0%
	% of Total	0.0%	25.8%	25.8%
Joint venture	Count	6	8	14
	% within Ownership of the firm	42.9%	57.1%	100.0%
	% of Total	9.1%	12.1%	21.2%
Government owned	Count	21	3	24
	% within Ownership of the firm	87.5%	12.5%	100.0%
	% of Total	31.8%	4.5%	36.4%
Total	Count	38	28	66
	% within Ownership of the firm	57.6%	42.4%	100.0%
	% of Total	57.6%	42.4%	100.0%

Table 1: Comparison of Firm Ownership and Branches outside South Sudan

On business specialization or the area of core business, the output shows major oil mining firms are government owned, 45.5% and internationally owned, 42.4% while 12.1% are owned jointly and none by locals. A similar trend of ownership is observed for oil distributors, oil processor and oil waste management. Oil processor are owned by government (46.4%), followed by locals (28.6%), joint ventures (14.3%), and lastly international firms (10.7%). For oil processor, 37.5% is owned by government, 28.1% by locals, 21.9% as joint venture and 12.5% by international firms. While for oil waste management, the government and locals own similar share of 29.4% evenly followed by joint ventures at 23.5%, and internationally owned at 17.6%. Oil piping had a different trend with dominance by joint venture firms at 37.5% followed closely by government and international ownership each at 31.3%.

4.2. Suppliers Bargaining Power

The suppliers' bargaining power in Porter's model was measured on a five Likert scale using the following variables: products are readily available from many suppliers at the different market place; there are few large suppliers in the industry who dominates the market share of oil industry; suppliers provide items that account for a sizeable fraction of the industry products; there are few suppliers who make large profit in the oil industry in South Sudan; lastly, it is easy for industry members to make profit by getting substitutes products.

The mean comparison of the same variables shows that the presence of few large suppliers who dominate the market had the highest mean, M=4.30, Sdvt =.744 followed by ease of profit making by members on substitute products with mean of 4.20, Sdvt = .827. Few suppliers who make large profit followed with M=4.15, Sdvt=.864; suppliers provide items that account for industry products at M=4.06, Sdvt=.892 and lastly, products are readily available from many suppliers with mean of 3.98 and Sdvt of .794.

4.3. Type of Business and Bargaining Power of Suppliers

Cross tabulation between business type and availability of products from many suppliers revealed, all (100%) respondents from oil distribution, oil waste management, and oil piping companies agreed that products are readily available from many suppliers at the different market place while oil mining and oil processor had different opinions. However, there was no significant relationship between the type of business conducted by an oil firm and availability of oil products from many suppliers, p=.087, X^2 = 29.061, df (20). This difference is expected as oil products required from suppliers differ based on the markets.

There was statistical significance between the type of business and other variables informing the bargaining power of suppliers: there is presence of few large suppliers who dominate the oil market industry in South Sudan, p=.006, X^2 = 32.432, df (15); suppliers provide items that accounts for sizeable fraction of the industry products, p=.0005, X^2 = 88.607, df (15); there are few suppliers who make large profit in the oil industry in South Sudan, p=.0005, X^2 = 84.150, df (20); and it is easy for industry members to make profit by getting substitutes products, p=.048, X^2 = 31.557, df (20). This shows suppliers have bargaining power in all the business types operating in South Sudan.

4.4. Ownership and Branches of the Firm and Suppliers Bargaining Power

To determine the relationship between suppliers' powers and different owners of oil firms in South Sudan; locally owned firms, government owned firms, internationally owned firms and joint ventures firms, a non-parametric equation was used. There is no statistical significance between the branches of oil firms and suppliers bargaining power except on the ability of members to make profit by getting substitute products (p=.032, X^2 = 22.482, df (12)). Though statistically significant, the chi-square strength is very low (X^2 =22.482). other variables are indicated in table 4.18 below.

		Value	Df	P
Products are readily available from many suppliers	Pearson Chi-Square	19.184[a]	12	0.084
Few large suppliers who dominate market	Pearson Chi-Square	13.534[a]	9	0.14
Suppliers provide items that account for industry products	Pearson Chi-Square	12.111[a]	9	0.207
Few suppliers make large profit	Pearson Chi-Square	20.641[a]	12	0.056
Ease of profit making by members on substitute products.	Pearson Chi-Square	22.482[a]	12	0.032

Table 2: Correlation between Ownership and Suppliers Bargaining Power.
p=Asymp. Sig. (2-sided)

On the number of branches, the correlation between suppliers bargaining power and whether a firm operating in South Sudan had a branch outside south Sudan or not, had the following. Significant relationship between suppliers provide items that accounts for sizeable fraction of the industry products, p=.011, X^2 = 11.116, df (3); and there are few suppliers who make large profit in the oil industry in South Sudan, p=.035, X^2 = 10.342, df (4). This shows, the branches that an oil firm operating in South Sudan has, significantly determines the ability of a firm to provide items that accounts for sizeable fraction of the industry products and the ability of few suppliers to make large profit in the oil industry in South Sudan.

However, whether a firm has branches outside South Sudan or not does not significantly affect the availability of products from many suppliers at the different market prices, p=.165, X^2 = 6.496, df (4); presence of few large suppliers who dominate oil market industry in south Sudan, p=.250, X^2 = 4.106, df (3); and the ease of industry members to make profit by getting substitutes products, p=.059, X^2 = 9.091, df (4). This shows the availability of products from many suppliers at different market price, presence of few large suppliers and ease of industry members to make profit are determined by other factors other than the oil firms' presence in other countries.

4.5. Influence of Suppliers Bargaining Power on Performance of Oil industry

In order to determine the level of influence that suppliers bargaining power have on performance of the oil industry in South Sudan, multiple regressions was conducted since the measure of performance was in scale ranking. With performance as independent variable and suppliers bargaining power as dependent variable, multiple regressions show how a suppliers bargaining power affects and predicts performance of oil firms. Based on the model, only 12.1% of performance of oil firms can be explained based on power of supplier in the oil industry in South Sudan (r=.348). The other 87.9% of performance are attributed to other factors other than bargaining power of suppliers.

The ANOVA test was also positively significant (p= .004 < p=.05; F=8.810, df=1, 64 p= .004 <.05). The residual outcome of mean square is also smaller than the regression. This shows the regression model constructed is better in predicting the outcome variable on how power of supplier affect performance than predicting the outcome using mean equation. On the coefficients model, the analysis shows suppliers power statistically predict value of performance (Beta = .348, t (65) = 2.968, p=.004< .005). The betaweight gauges the importance of explanatory variable across the model and is positive on the power of supplier, Beta of .348 and statistically significant at p<.05. This means, one unit of increase in power of supplier increases the unit of performance by .439 with or without the influence of moderating variable as indicated in table 4.

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.359	.617		3.821	.000
	Power_of_supplier	.439	.148	.348	2.968	.004
a. Dependent Variable: performance						

Table 2: Coefficients on Suppliers Bargaining Power on Performance

The general form of the regression model used was:

$Y = \beta_0 + \beta_i x_i + \varepsilon$

Thus from the coefficient table, suppliers bargaining power significantly affect performance of oil in South Sudan with the equation Y= 2.359 + .348X + .148

5. Conclusion

The study found, all the factors relating to suppliers bargaining power influences performance of oil industry. These factors are: oil firms have presence of few large suppliers who dominate the market, industry members easily make profit on substitute products, there are few suppliers who make large profit, suppliers provide items that account for industry products and products are readily available from many suppliers. Further, these factors affect performance of all types of business positively hence concludes, suppliers bargaining power affects all types of business in oil industry; piping, mining, waste management, processing and transportation. The study also concluded oil branches affects suppliers power based on presence of few large suppliers who dominate the market, industry members easily make profit on substitute products, there are few suppliers who make large profit, suppliers provide items that account for industry products and products are readily available from many suppliers. On the duration of operation the study concludes that the number of years that a firm has been operating or the size of the market share does not affects suppliers' bargaining power hence duration of operation has no effect on performance of oil industry in south Sudan. From the regression model results, the research concludes that the bargaining power of supplier affects performance of oil industry in South Sudan and can predict an increase of performance by .439 on every increase of substitute products.

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