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The scramble for African mining by world economic powers: Concern for Africa's

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Abstract. Mining has become a very lucrative business for the global economic powers. On the African continent, this seemingly opportunity for developing African countries like Nigeria, Ghana and South Africa that enjoy huge mineral deposits comes with its repercussions in relation to their respective economic performances as they open their doors to selected top economies of the world. This paper therefore looks at the general mining environment on the continent as a whole, narrowed down to specialized countries of Africa on coal mining, crude oil and gold mining with emphasis in the South African, Nigerian and Ghanaian context. Using descriptive research design and the correlation method of analysis, this conceptual paper identifies that with the Africa mining industry is becoming more scrambled for and this has left wavering relationship with the economic growth on the African continent despite the improvements on the economies of the scramblers. As recommendation however, the study suggested that the various governments in Africa should review some obsolete negotiation terms which are against the modern realities in the mining sector so as not to be overtaken by events as they open their doors to foreign investors in the mining sectors.
Keywords. Africa, Mining, Mineral Products, Correlation, Economy, Scramble.
JEL. F66, F10, F13.

1. Introduction

The abundance and eventual development of mineral resources can have very different implications and consequences, for communities, governments, the mine developers themselves and even countries and regions in which mining activities are taking place. A comparative perspective reveals not only the large divergence in the interests of various stakeholders, but the wide range of conditions under which mineral exploration, exploitation and general scramble take place, especially in the mining sector in Africa (Economic Commission for Africa, 2011).

Mining is described as the process of digging into the earth to extract naturally occurring minerals (Amponsah-Tawiah, & Dartey-Baah, 2015). Mining is considered the second of humankind's earliest endeavors — granted that agriculture was the first. The two industries ranked together as the primary or basic industries of early civilization. Classifying fishing and lumbering as part of agriculture and oil and gas production as part of mining, then agriculture and mining continue to supply all the basic resources used by modern civilization across the globe (Down & Stocks,

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1977). It is currently the fifth largest industry in the world and it plays a crucial role in world economic development. The trade of mineral commodities represents a substantial part of international trade which the African continent has been adjudged a major stakeholder in the mining activity where she serves a major market for exploration for the top economies of the world (Madeley, 1999).

According to the United Nation Economic and Social Council (2009), Africa is a haven for mineral resources both liquid minerals, solid and gas. The US Geological society ranks Africa as the largest or second-largest reserve of bauxite, cobalt, industrial diamonds, manganese, phosphate rock, platinum group metals and zirconium with the key mineral resources being Precious metals, diamonds and copper (KPMG, 2013). The continent harbours the world's largest mineral reserves of platinum, gold, diamonds, chromite, manganese, and vanadium as shown in table one below:

Table 1. *Some leading African Mineral Resources*

Mineral	African percent of World Production	Rank	African Percent of World Reserves	Rank
Platinum Group Metals	54percent	1	60+ percent	1
Phosphate	27percent	1	66 percent	1
Gold	20Percent	1	42 percent	1
Chromium	40percent	1	44 percent	1
Manganese	28percent	2	82 percent	1
Vanadium	51percent	1	95 percent	1
Cobalt	18percent	1	55+ percent	1
Diamonds	78percent	1	88 percent	1
Aluminium	4percent	7	45 percent	1

Source: United Nations Economic and Social Council (2009).

Most of these minerals are exported as ores, concentrates or metals without significant downstream processing to add value which expectedly would be beneficial to the through value added taxes and other royalty payments capable of spurring her economic growth. As a result, leaving behind several rich and untapped mineral potential would have acted as a catalyst for Africa's growth and development (UNESC, 2009).

The development of the mining and other extractive industries is expected to leave a trail of continuous growth of direct and indirect investment in the countries with the mining resources. However, only 10% of the profits generated by the extractive industry remain in the continent (Aranda, 2019). Moreover, Africa loses $80 billion annually in illicit financial flows from the mining firms, 70 per cent of which comes from extractive industries, particularly mineral resources. However, not all African countries rich in natural resources have seen their GDP increased in the long term. With unfair tax systems that benefit extractive companies from developed economies without commensurate reinvestment in land-owning communities and their populations, Africa has been described with the paradox of "lack amidst plenty" whose economic indicator (Real Gross

Domestic Product) has continued to nosedive despite the new scramble for her mining proceeds by the world economic powers.

According to Kurecic & Seba (2017), it is paradoxical for countries that are one of the largest producers of mining resources in the world (such as crude oil for Nigeria, Coal for South Africa and Gold for Ghana) to have experienced a significant decline in per capita income in recent decades, and as one of the most negative examples is Nigeria, where 70% of the population lives on less than one dollar a day, which is disappointing if we take into account the wealth to be gained from exploration and other mining activities in the country.

A tendency where African countries which are rich in natural resources have low economic growth represents an economic puzzle knowing that economists believe that natural resources are expected to be a potential source of national income.

For this reason, this study investigated what the nature of relationship is between the GDPs of the selected African exporters of mining products (South Africa, Ghana and Nigeria) and the value of the mining products being traded to the top five world economies of USA, China, Japan, Germany and UK.

2. Literature review

In the views of Amponsah-Tawiah & Dartey-Baah (2015), mining is described as the process of digging into the earth to extract naturally occurring minerals. David, Noah & Agbalajobi (2016) posit that minerals can either be extracted from the surface of the earth or from deep in the earth. The process of extracting minerals from open mines is termed as quarrying while the process of extracting minerals from shaft mines is termed as mining. Just as Jhingan & Sharma (2008) buttressed that for limestone and marble stones, quarrying processes take place, whereas

Meanwhile, the economic performances for the continent shall be hinged on economic growth which is measured using the GDP (Ogunmuyiwa & Ekone, 2010). Atangana, Adamuo & Njie (2016) see Economic growth as the process whereby the real per capita income of a country increases over a long period of time. Economic growth is measured by the amounts of goods and services produced in a country. Adonike (2019) asserts that it is a desirable goal for African Economies. It is the long-term rise in capacity to supply increasingly diverse economic goods and services to its population; this growth capacity is based on advancing technologies, the institutional and ideological advancement that it demands. Economic growth can be regarded as an important macroeconomic objective for the governments of Africa given the fact that it occurs whenever there is a quantitative increase in country's input and output over a period of time.

2.1. Mining in Nigeria

The Africa's largest economy, Nigeria is richly endowed with vast natural resources that are widely distributed across the country. Among these are; solid minerals, petroleum and natural gas. About fifty solid minerals have been discovered in five hundred locations in the country (Alison-Madueke, 2009, as cited in David, Noah & Agbalajobi (2016). Bridge (2008) posits that mining is done virtually in all the states of the federation in Nigeria thereby viewing the mining sector as a key driver of economic growth and the development process, which had the potency lead to higher levels of social and economic well being for Nigeria. During the colonial period and after the country's independence in 1960, Adeleke (1999) noted that Coal and tin ranked high as Nigeria's foreign exchange earners whereas other minerals such as limestone, gold, marble, clay and so on were mined to a lesser degree mainly for local consumption

However, crude oil discovery in 1956, oil boom of the 1970s and early 1980s greatly affected the mining industry to an extent that the overall contribution of mining to the national Gross Domestic Product (GDP) has been declining and was about 0.5% in 2009 (David, Noah & Agbalajobi, 2016). This has led Nigerian economy to become a mono product economy and hence vulnerable to international oil politics and its shocks. The domineering role of oil did not allow past governments to attend to global challenges that evolved in the development of mining. This therefore made the major mining produce for Nigeria to be her crude oil. This has also attracted the attentions of top economies of the world – China, USA, Japan, UK, Germany, etc., to scramble her crude oil over the years as graphically shown below:

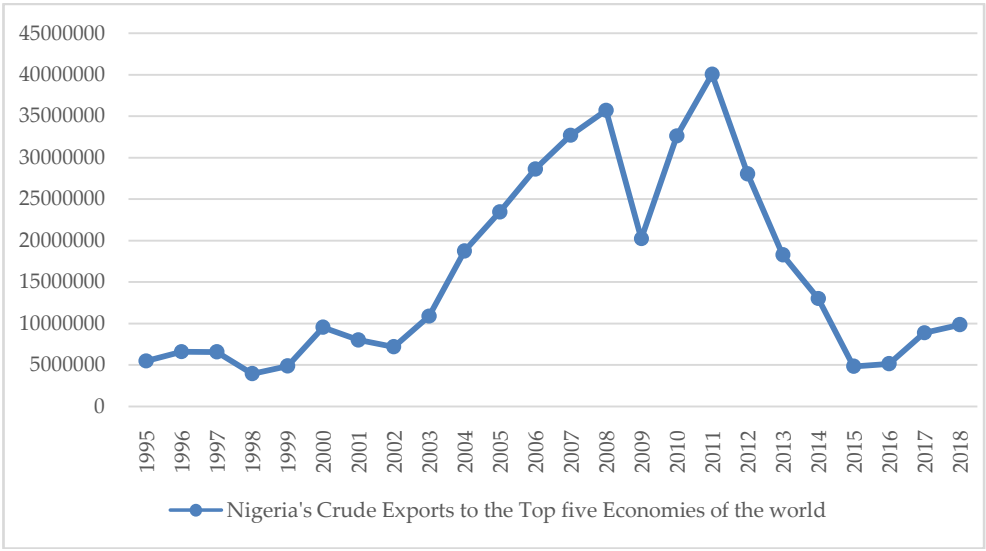

Figure 1. *Nigeria's Crude Exports to the Top five Economies of USA, China, Germany, Japan and UK.*
Source: UNCTAD (2019).

Though Nigeria has great mining potentials for development of her economy but its present contribution to the GDP at 0.5% is still very low and unfavourable when compared to the contributions of other sectors of her economy.

2.2. Mining in Ghana

The mining sector of Ghana has got historical importance in the economic development of Ghana with the country's colonial name Gold Coast, reflecting the importance of the mining sector, particularly, the gold trade in the country (Agbesinyale 2003; Akabzaa 2000 as cited in Amponsah-Tawiah & Dartey-Baah (2015). Reports has it that Ghana has a long tradition of gold mining with an estimated 2,488 metric tons (80 million ounces) of gold produced between the first documentation of gold mining in 1493 and 1997 (Kesse, 1985; Ghana Chamber of Mines, 1998; Amponsah-Tawiah & Dartey-Baah, 2015). At the world stage, the scramble for Gold in Ghana by world economic powers has ensured that Ghana accounts for 36% of total world gold output (8,153,426 ounces) between 1493 and 1600 (Tsikata, 1997). This is further buttressed graphically in figure 2 below:

Figure 2. *Ghana's Total Gold export to the Top five Economies of USA, China, Germany, Japan and UK.*
Source: UNCTAD (2019)

Being one of the largest gold producer in Africa, the third-largest African producer of aluminum, metal and manganese ore and a significant producer of bauxite and diamond, the Ghanaian economy has however not ranked among the top economic giants on the continent in particular and in the world at large.

2.3. Mining in South Africa

Studies have shown that the South Africa's mining sector is over a century old, starting with the discovery of gold in former Transvaal province in 1896, roughly twenty years after the discovery of diamonds

and has an average 18.4% contribution to the national GDP, making it the fourth largest contributor to South Africa's Gross Domestic Product (Harrington, *et al.*, 2003; Stats SA, 2011, as cited in Ngobese, 2015). During that period, the mining sector created approximately 500,000 direct jobs and about 500, 000 indirect jobs as well as contributing more that 18% of the country's GDP (Ngobese, 2015). Mining is a highly recognised sector in the economy given its contribution to employment creation and is right at the heart of government planning.

Coal mining in South Africa plays a significant role in the country's economy. Over 90% of the coal consumed in Africa is produced in South Africa. Coal mining in South Africa is centered on the Highveld, with roughly 60% of the country's deposits located in eMalahleni (Witbank) and surrounding areas. South Africa produces over 250 million tons of coal every year thereby, making South Africa is one of the seven largest coal-producing and one of the top five coal exporting countries in the world (Africa Mining IQ, 2019).

This has therefore served as centre of attraction to top economies of the world among which are USA, China, UK, Japan and Germany. This is further clearly shown in the graph below:

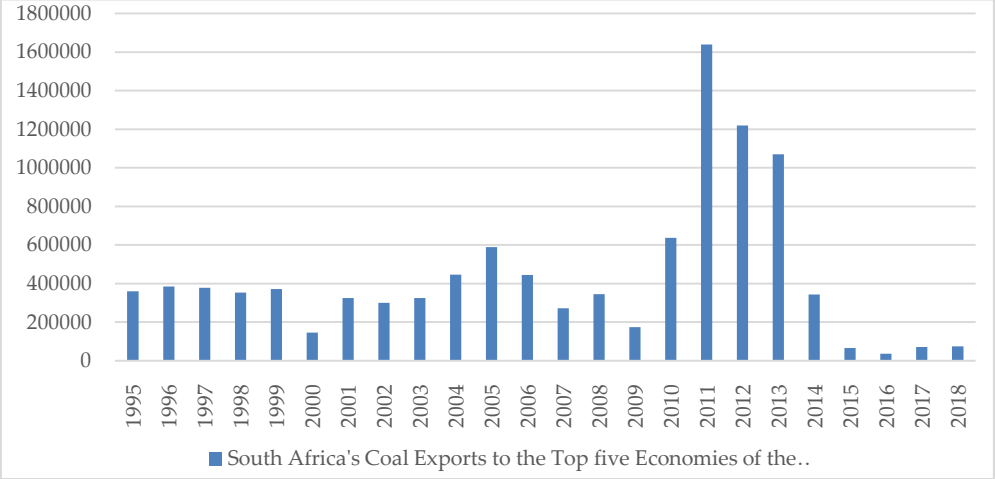

Figure 3. *South Africa's Coal Exports to the Top five Economies of USA, China, Germany, Japan and UK.*
Source: UNCTAD (2019)

Predominantly used to generate electricity by these top economies, coal is also used by the steel industry to extract iron from iron ore and in the production of cement.

2.4. Empirical reviews

Several empirical studies have been conducted to unravel the efficacy of the scramble for African mining industry towards the economic prosperity of the continent. Studies relevant to this study are:

Adeniyi, Adeleke & Olabode (2013), in their analysis on the legal regime for exploring solid minerals for economic growth in Nigeria, between 1991

– 2011 employing mainly qualitative analysis to show that the solid mineral sector remains crucial to economic development, wealth creation and poverty alleviation in any nation that is blessed with such mineral deposits. He-concluded that the Nigeria government should adopt best practices and mechanisms that have been used by different countries to formalize and regulate mining explorations in order to attain sustainable development in the mining sector in Nigeria.

Akongwale *et al.*, (2013) in their analysis on the role of solid minerals on economic diversification in Nigeria, employing both qualitative and quantitative (descriptive) analysis, showed that the solid mineral sector in Nigeria has the potential to contribute immensely to the economy of Nigeria. Specifically, it reveals that the development of the solid mineral sector could help to combat poverty in Nigeria via job creation; especially, given its forward linkage with other sectors of the economy. The study concluded that the realization of these potentials need the strengthening of Nigeria's existing solid mineral development policy and creation of an enabling environment by the government for the private sector to take the lead in the sector.

Adekeye (2010) in his study on impact of Conflict on Mining in Nigeria, employing both qualitative and quantitative (descriptive) analysis, revealed that Nigeria stands to benefit from the development of solid minerals sector and concluded that the government must provide enabling environment for the private sector investment in mining.

David, *et al.*, (2016) conducted a study to analyse the Contribution of Mining Sector to Economic Development in Nigeria from 1960 to 2012. The study employed Error Correction Model (ECM) to examine the short run and long run effect of mining sector's contribution to Nigeria economic development. The study harnessed time series data to evaluate the impact of the specified key sectors; crude petroleum and gas, solid mineral, manufacturing and agriculture on the economic development proxied by per capita income. The finding revealed that the value of solid mineral have strong impact on economic development in Nigeria

Michaels (2011) investigates the long-term consequences of natural resource extraction by analyzing southern U.S. counties overlaying significant oil reserves in 1890. By 1990, counties overlaying oil reserves had higher per capita incomes, larger populations, and more public infrastructure compared to other southern U.S. counties without oil resources. However, these positive effects begin to wane around 1960.

Deaton & Niman (2012) use decennial census data to analyze the effect of coal mining employment on poverty rates in Appalachia. They found increases in contemporaneous mining employment reduce poverty. However, higher levels of mining employment ten years prior were associated with higher poverty rates and the effect was stronger than the contemporaneous effect, consistent with a resources curse explanation.

From the above, it is evident that literature abounds on the study of mining with respect to different economies of the world. These studies

have been reviewed critically with several of them adopting regression analyses and other related quantitative measures to carry out their studies whereas the rest adopted descriptive measures. However, it was discovered, to the best of the knowledge of the researcher, that none has attempted to do a cross country study by investigating the nexus which the scramble for the products of African (Nigeria, Ghana and South Africa) mining by top economies of the world (Germany, USA, UK, Japan and China) using a combination of correlation technique and descriptive analysis. Hence, this study is poised to fill the knowledge gap by adding to existing literature in their bid to investigate how the scramble for some selected major mining proceeds from selected specialized countries in Africa correlating it with the economic growth of the African countries from 1995 to 2018.

3. Methodology

3.1. Research design

This study was carried out through a descriptive research methodology. Creswell (2008) as cited by Wuantai (2017) affirmed that the goal of descriptive study is to gather data about the present situation. In other words, Descriptive research design is a scientific method which involves observing and describing the behavior of a subject without influencing it in any way thereby answering the *'what' questions in a research*. The stress was on describing and not on pronouncing judgment or explanation. The descriptive approach is apt for this study given that the study is poised to investigate what the nature of relationship is among the GDPs of the selected African exporters of mining products and the value of the mining products being traded to the top five world economies of USA, China, Japan, Germany and UK.

3.2. Analytical framework

This study shall be hinged on the Export-Led Growth Hypothesis (ELGH). The export-led growth hypothesis as popularized by Feder in 1983 postulates that export is the main determinant of overall economic growth. One of the main arguments in support of the hypothesis is that proceeds from the export of these mining produce can be used to revamp the economic performance (measured by Gross Domestic Product) through dynamic spillover effects on the rest of the economy of the home country. The Export-Led Growth theory, according to Lucas (1988) has been termed "learning by doing" or more precisely "learning by exporting" following its wide acceptability among the exporting world. This study however adopts the theory to help portray how African country's economies can take advantage of the scramble for her mining and learn to improve on her economy through mining proceeds from her trading partners.

3.3. Method of analysis

This study adopted a correlation analysis to describe the nature of relations of the variables as depicted below:

$$Y= f(X1, X2, X3, X4, X5)$$

Where,

Y is the stochastic variable measuring the economic performances (measured by the real gross domestic products of the African mining economies)

X_1-X_5 are the value of the export of the mining products (Crude oil from Nigeria, Gold from Ghana and South Africa) to the world top economies of United States, China, Japan, Germany and the United Kingdom respectively.

3.4. Data sources

The study employed secondary data. They are the time series data on the included variables. The data for the mining products were sourced from United Nations Conferences for Trade and Agreement (UNCTAD) and whereas the Gross domestic products were sourced from the World Bank Database.

3.5. Estimation procedure

This paper employs the descriptive analysis and Pearson correlation method model in estimating the relationship between export of the mining proceeds and the gross domestic product of the mining countries. Using correlation analysis, the study sought to examine the nature of relationship between the dependent variable and the independent variable so as to help show whether the continued scramble for mining in Africa has helped to improve or retard her economy. Using Pearson correlation coefficient (r) and *p*-value analysis, a correlation was considered significant when the probability value was below 0.05 (p-value ≤ 0.05). Correlation values (r) close to zero meant a weak relationship and r close to one meant a strong correlation existed.

4. Results

This section presents the results of the descriptive analyses and Correlation coefficients on the scramble patterns of African mining products from Nigeria, Ghana and South Africa by Germany, China USA Japan and UK respectively

4.1. Scramble for Nigerian crude oil and economic growth

Table 1 shows the summary statistics of all the variables under study in their raw form. Specifically, the mean values for crude oil mining to Germany, China, USA, Japan and the United Kingdom stood at about

$1,387,800m, $480,010m, $1,277,1000m, $302,840m and $1,017,400m respectively.

Table 1. *Scramble for Crude oil in Nigeria (Descriptive Statistics)*

Scramble Pattern	N	Minimum	Maximum	Mean	Std. Dev.
Crude Oil to Germany From Nigeria	24	1.43E5	4.32E6	1.3878E6	1.30331E6
Crude Oil to China From Nigeria	24	.00	1.96E6	4.8001E5	4.79789E5
Crude Oil to USA from Nigeria	24	1.37E6	3.28E7	1.2771E7	1.04522E7
Crude Oil to Japan from Nigeria	24	.00	1.47E6	3.0284E5	3.78088E5
Crude Oil to UK from Nigeria	24	23244.96	4.76E6	1.0174E6	1.35535E6
Nigeria Economic Performance by GDP	24	44.06	568.50	2.5205E2	175.32340
Valid N (list wise)	24				

Table 2. *Scramble for Crude oil in Nigeria (Pearson Correlation matrix)*

Scramble Pattern		Nigeria Economic Performance by GDP
Crude Oil to Germany From Nigeria	Pearson Correlation	.809**
	Sig. (2-tailed)	.000
	N	24
Crude Oil to China From Nigeria	Pearson Correlation	.831**
	Sig. (2-tailed)	.000
	N	24
Crude Oil to USA from Nigeria	Pearson Correlation	.190
	Sig. (2-tailed)	.374
	N	24
Crude Oil to Japan from Nigeria	Pearson Correlation	-.226
	Sig. (2-tailed)	.288
	N	24
Crude Oil to UK from Nigeria	Pearson Correlation	.821**
	Sig. (2-tailed)	.000
	N	24

Notes: **. *Correlation is significant at the 0.01 level (2-tailed).*

This shows the average values of the variables for the 24 periods under study. Their respective minimum and maximum values are equally shown indicating variations over the years for the respective series. The descriptive statistics comparatively showed that most of Nigeria's crude goes to the European economic giant – Germany, with Japan also accounting for the largest share after Germany. Her then colonial master – United Kingdom (UK), China and Japan were among those whose scramble for the crude oil resource were respectively ranked third, fourth and fifth following their mean scramble of $1,017,400m, $480,010m, and $302,840m respectively. In the same vein, the correlation analysis in table 2 indicated that the economic performance of Nigeria as measured by the gross domestic product, has a negative and insignificant relationship with the Japanese scramble for the oil rich nation's resources. The scramble for

mining by United Kingdom, Germany and China respectively has very strong positive and significant correlation coefficients of 0.821, 0,809 and 0.831 with the economic performance of Nigeria. However, with the insignificant positive correlation coefficient of 0.19 results while the scramble by the United States (USA) does not have significant relationship with the Nigeria's economic performance over the years.

4.2. Scramble for Ghanaian gold and economic growth

For Ghana, the average values for gold mining to Germany, China, USA, Japan and the United Kingdom stood at about $630.96m, $3,241.5m, $3,215.3m, $313.28m and $33,584m respectively for the 24 periods under study.

Table 3. *Scramble for Gold in Ghana (Descriptive Statistics)*

	N	Minimum	Maximum	Mean	Std. Deviation
Gold to Germany from Ghana	24	.00	4774.76	6.3096E2	1165.68542
Gold to China from Ghana	24	.00	43233.50	3.2415E3	10668.80105
Gold to USA from Ghana	24	128.21	19807.11	3.2153E3	4252.93907
Gold to Japan from Ghana	24	.00	2677.32	3.1328E2	582.76030
Gold to UK from Ghana	24	9.77	2.04E5	3.3584E4	55407.66890
Ghana Economic Performance by GDP	24	4.98	65.56	26.5908	21.47276
Valid N (listwise)	24				

Table 4. *Scramble for Gold in Ghana (Pearson Correlation matrix)*

Scramble pattern		Ghana Economic Performance by GDP
Gold to Germany from Ghana	Pearson Correlation	-.260
	Sig. (2-tailed)	.220
	N	24
Gold to China from Ghana	Pearson Correlation	.436*
	Sig. (2-tailed)	.033
	N	24
Gold to USA from Ghana	Pearson Correlation	.387
	Sig. (2-tailed)	.062
	N	24
Gold to Japan from Ghana	Pearson Correlation	.244
	Sig. (2-tailed)	.251
	N	24
Gold to UK from Ghana	Pearson Correlation	-.594**
	Sig. (2-tailed)	.002
	N	24

Notes: *. Correlation is significant at the 0.05 level (2-tailed). **. Correlation is significant at the 0.01 level (2-tailed).

The descriptive statistics comparatively showed that most of Ghana's gold mining goes to her then colonial master - United Kingdom (UK) with the mean value of $33,584m with the Asian economic giant – China

seconding her. USA, Germany and Japan were among those whose scramble for the gold mines in Ghana were respectively ranked third, fourth and fifth following their mean scramble of $3,215.3m, 630.96m and $313.28m respectively.

Concurrently, the Pearson correlation analysis in table 4 indicated that the economic performance of Ghana as measured by the gross domestic product has an insignificant negative relationship with the scramble for gold by the Germans following its correlation coefficient of -0.260. The Japanese scramble for the gold mines in Ghana has an insignificant positive relationship with the Ghanaian economic growth following its correlation coefficient of 0.244. Although the result revealed that the scramble for the resource by United Kingdom has an above average significant negative relationship to the Ghanaian economy. However, China and the USA respectively have strong positive and significant correlation coefficients of 0.436 and 0.387 with the economic performance of Ghana.

4.3. Scramble for South African coal and economic growth

Also, for South Africa the average values for Coal mining to Germany, China, USA, Japan and the United Kingdom over the years averaged $43,444m, $172,890m, $16,422m, $21,959m and $177,490m respectively for the 24 periods under study. The descriptive statistics in table 5 comparatively revealed that most of South Africa's Coal mining goes to the United Kingdom (UK) with the mean value of $177,490m with the Asian economic giant – China also seconding her. Germany, Japan and USA, were ranked among those whose scramble for the Coal mines in South Africa were respectively ranked third, fourth and fifth following their mean scramble of $43,444m, $21,959m and $16,422m respectively.

Table 5. *Scramble for Coal in South Africa (Descriptive Statistics)*

Scramble pattern	N	Minimum	Maximum	Mean	Std. Dev.
South Africa Economic Performance by GDP	24	115.48	416.42	2.5652E2	100.56577
Coal to UK from S/Africa	24	.76	5.43E5	1.7749E5	1.47973E5
Coal to Japan from S/Africa	24	.02	66182.60	2.1959E4	16148.15116
Coal to USA from S/Africa	24	.12	51737.79	1.6422E4	17556.01301
Coal to China from S/Africa	24	.00	1.36E6	1.7289E5	3.88332E5
Coal to Germany from S/Africa	24	.06	1.16E5	4.3444E4	38015.00093
Valid N (listwise)	24				

Source: Author's compilation using SPSS V.16 (2019).

Table 6. *Scramble for Coal in South Africa (Pearson Correlation matrix)*

Scramble Pattern		South Africa Economic Performance by GDP
Coal to Japan from S/Africa	Pearson Correlation	.058
	Sig. (2-tailed)	.788
	N	24
Coal to UK from S/Africa	Pearson Correlation	-.515**
	Sig. (2-tailed)	.010
	N	24
Coal to USA from S/Africa	Pearson Correlation	.552**
	Sig. (2-tailed)	.005
	N	24
Coal to Germany from S/Africa	Pearson Correlation	-.308
	Sig. (2-tailed)	.143
	N	24
Coal to China from S/Africa	Pearson Correlation	.609**
	Sig. (2-tailed)	.002
	N	24

Source: Author's compilation using SPSS V.16 (2019).

In the same vein, the Pearson correlation analysis in table 6 indicates that the economic performance of South Africa as measured by the gross domestic product, has an insignificant negative relationship with the scramble for Coal by the Germans following its correlation coefficient of -0.308. The Japanese scramble for the Coal mines in South Africa also has a very weak and insignificant positive relationship with the South Africa's economic growth following its correlation coefficient of 0.058. The scramble for the resource by United Kingdom has an average significant negative relationship with the South Africa's economy following the coefficient of -0.515. However, China and the USA respectively maintained a strong positive and significant correlation coefficients of 0.609 and 0.552 with the economic performance of South Africa.

5. Conclusion and recommendation

It has been established that the mining sector in Africa is one of the main sources of providing primary materials needed for running other industries across the globe which in return have had wavering relationship with the economic performance on the continent. By reviewing the theoretical background, the empirical literature and the status of mining sector on the continent, this study described the nexus between the new scramble for African mining by the world economic powers (USA, China, Japan, Germany and UK) and economic growth in Africa using some of the major scrambled mining products being crude oil, gold and coal from their respective key producers on the continent being Nigeria, South Africa and Ghana.

Findings from the Pearson correlation coefficients showed that among the key mining products on the continents, the scramble for crude oil in

Africa and Nigeria in particular has attracted the Germans the most. This scramble however has been on the good books of the continent's largest economy as a result of the fact that the export of this product to the European economic giant has maintained a significant positive relationship with the GDP of Nigeria over the years. Though, the direct opposite can be ascribed to the Japanese transaction with Nigeria on crude. This is because findings have shown that there has not been positive relationship between the scramble and Nigeria's economic growth performance despite scrambling the most for the crude oil after the Germans.

In the same vein, the gold mining in Ghana has been a main cynosure of the eyes of the United Kingdom which has maintained a continuous top scramble for the gold mine. However, this scramble has continued to have adverse relationship with the economic performance of Ghana as findings have revealed. Although, the terms underlining export of the proceed with the worlds' top two largest economies – USA and China has been found to significantly relate with Ghana's GDP despite the United states not being a top consumer of the precious metal from Ghana.

Findings further revealed that the South Africa's GDP would grow if the terms underlining the scramble for coal by China and USA in the country are maintained. This is not the same with the European counterparts of Germany and United Kingdom. Findings showed that the South African economy will suffer a great deal if they continue the coal mining business with Germans and the British.

However, considering the numerous controversies that surround mining projects all over the continent, it is therefore recommended that the various governments in Africa should review some obsolete negotiation terms which may be against the modern realities in the mining sector so as not to be overhauled or overtaken by events as they open their doors to foreign investors in the mining sectors.

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