Politics and the natural resource curse: Evidence from selected African states

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Abstract: This paper analysed political aspects of the resource curse in selected African states. The paper drew from the fact that the African region has extensive (untapped) natural resources deposits that, if utilised, can promote sustainable economic development. But despite the presence of these natural resources, the African region is poverty-stricken and still under-developed. Literature identified politics as among the factors that affect Africa's capacity to invest revenue from natural resources. Studies showed that there are close links between politics and the management of extractives. The study employed the PMG (ARDL) and the FMOLS for the period 1995–2016. Results from the study showed a positive relationship between efficient functioning of government and resource rents. There is also evidence for causality running from efficient functioning of government to resource rents and not vice versa. This shows that government performance is crucial for better performance in the natural resource extraction sector. Based on the findings, this study recommends that governments in African countries should improve on governance and the way the public sector institutions function. Harnessing the weak and politically fragile public institutions is important in order to kick start markets. The effective functioning of government institutions can be strengthened by eliminating corruption, stabilising property rights and investing in fiscal capacity.

Subjects: Public Policy; Development Studies; Politics & Development

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PUBLIC INTEREST STATEMENT
This research looked at the political aspects of the resource argument in a few African countries. The article drew on the notion that Africa contains vast (untapped) natural resource deposits that, if exploited, can help the continent achieve long-term economic growth. Despite the abundance of natural resources, the African continent remains impoverished and underdeveloped. Politics has been highlighted as one of the issues affecting Africa's ability to invest earnings from natural resources, according to the literature. According to studies, politics and extractive management are inextricably linked. The study’s findings revealed a favorable association between government efficiency and resource rents. This shows that government performance is crucial for better performance in the natural resource extraction sector.
Keywords: Natural resource curse; resource revenue; economic development; conflict; rentier effect; corruption; resource curse

1. Introduction and background to the study

Conventional wisdom suggests that revenue from natural resources should generate wealth and promote economic development. Natural resources and other sectors such as agriculture and the manufacturing sector normally serve as pillars in promoting economic development and growth. When used productively, proceeds from natural resources can be an essential catalyst for sustainable economic development. Natural resources are, in a way, a stock of natural capital (Davis & Tilton, 2005; Harvey, 2021; Muigua, 2020) and natural resource availability can thus be seen as a pool of wealth (Alhassan & Achaamah, 2021). Revenue from natural resources can be used to create a base from which economic growth can take off. The idea that natural resource wealth can support sustainable economic development is thus admitted. However, it must be noted that natural resources can bring negative outcomes. If there are no mechanisms that facilitate the transformation of natural resources into development outcomes, natural resources can be a curse (Henri, 2019; Sun et al., 2018).

The way a society is structured and the policy making process—in other words, the political atmosphere—are of vital importance for the management of natural resources (Jamart & Rodeghier, 2009; Kayitare et al., 2015). Politics and government approaches concerning the managing of natural resources are central to a sustainable society (Eckerberg, 2019). This shows that one of the most important mechanisms that supports resource extraction and management is the political environment. A stable political environment is crucial for resource extraction and growth. Political aspects such as the rule of law, effective institutions, an efficient public administration and absence of corruption enable a favourable business climate (Hussain, 2014). Proper political administration and natural resources can, under the right conditions, combine to create a virtuous circle of growth and prosperity. Empirical literature shows that resource-rich countries seem to be prone to bad government, a phenomenon scholars have termed “good economics, bad politics” (Lewin, 2011). Good economics implies adopting economic strategies that promote economic growth. Bad politics implies adopting political strategies that advance the interests of politicians at the expense of the citizens. Generally, the type of governance and existing political arrangement determine whether good economics is good politics (Agarwal, 2018). In African countries, where there is ineffective government and state institutions, politics rules and economic policy often go astray. The compulsion of politicians takes precedence over economic policies resulting in bad politics.

Many African countries place the ownership of natural resources to the government and the government is also the sole recipient of the funds obtained from resource extraction. Lewin (2011) states that this concentration of resource funds with the government may lead to a number of problems such as corruption, rent seeking and efficiency loses that result from maladministration. This shows that, in developing countries, resource revenue may make the government to engage in unproductive and inefficient ways. Instead of investing the resource rents in developmental programmes such as infrastructure projects and human capital, individuals in government channel mush of the resources to activities that make them to stay in power, and they also concentrate on projects that are not developmental (Baldwin, 2017). This, in many cases, consolidates the power of entrenched elites and regime supporters, sharpening income inequality and stifling political reform. In this way, it can be said that resource wealth worsens the quality of institutions, since it allows governments to pacify dissent, avoid accountability and resist modernization (Isham et al., 2003).

Resource revenue flows facilitate corruption by making it easy for officials to siphon profits for personal gains. Revenues also generate staggering wealth that facilitates corruption and patronage networks (Sterwart, 2012). This is commonplace in Africa where government funds are misappropriated by corrupt political elites. Africa has long been argued to suffer from a so-called “resource curse”, where
countries' natural resource endowments have not translated into positive economic growth (Chachu & Nketiah-Amponsah, 2021; Henri, 2019; Ziaba, 2020). In some cases, they have led to contraction. Using natural resources to build sustainable economic development is the challenge faced by many African governments (Sudhir, 2011; Aragbonfoh, 2015). Weak local governance in several African governments means that these African communities are suffering the most and receiving few tangible benefits. For autocrats, what appears to be bad policy is often good politics (Robinson et al., 2006). Kayitare et al. (2015) concur and state that these policies are often based on political calculations for electoral victory rather than clear internal policies resulting from internal discussion. This is the case in Africa where many countries have not yet achieved proper governance that can prevent dictatorship, corruption, and the resource curse (Crocker, 2019; Mbaku, 2020). This raises questions about how political factors affect natural resource extraction and management. What is the relationship between politics and natural resource management? This study, thus, seeks to examine the interrelationship between politics and resource extraction and management in selected African states. Although several studies have attempted to explore the factors that cause the resource curse in Africa, little effort has been done to test the relationship between political factors and natural resource management. Freehills (2020) notes that where the Resource Curse exists, it probably lies in the deeper political economy of institutions, rather than in economic management per se. The study argues that it is important to include political factors to analyze the resource curse in Africa and to observe to what extent and in what direction political factors affect resource extraction and management.

2. Literature review
There exists a huge literature on the interconnection between political factors and resource extraction and management. Political explanations of the resource curse can either be theoretical, institutional or a combination of the two. This study focusses on the following explanations: Rentier Effect, Staple Trap model, Institution theory and the Dependency theory.

2.1. Theoretical explanations

2.1.1. Rentier effect
The “rentier effect”, which posits that states that have access to natural resource revenues and other types of windfall gains are less reliant on tax revenues, which makes them less responsive to citizens’ demands (Desierto, 2018). Building on a number of studies of what has become known as the “rentier state”, Pritchett (2000) argue that revenue flows generated by the sale of resources increase the power of existing elites. This is commonplace in Africa. African governments fail to manage resource revenue. In several African states such as Sudan and DRC, the revenue management process is filled with corruption and mismanagement, and this reduces the quality of institutions and the government itself (Kurečić & Seba, 2016).

2.1.2. Staple trap model
The term “staple” refers to the chief commodity produced by a region (Vahabi, 2017). It occurs when a country heavily relies on a single commodity for growth. This commodity becomes staple for growth. While the economy may get caught in a “staple trap” due to its reliance on a “bad” staple, it can enjoy sustainable growth because of diversification induced by a “good” staple. Staple trap is the equivalent of a resource curse since it blocks the diversification process. By failing to make adequate investments in other sectors, countries can become vulnerable to declines in commodity prices, leading to long-run economic underperformance. In Africa, several countries are dependent on a single commodity. For example, Zambia is dependent on copper (Crain, 2020). The fall of copper prices has always affected Zambia’s growth (Atanesyan, 2016). The trap model is also related to the Dutch disease. Dutch disease hypothesized that a booming natural resource sector can lead to a decline in the development of other tradable sectors (Neo, 2009).

2.1.3. Dependency model
The capitalist world economic system is organized to ensure a perpetual domination of the periphery by the core and dependence of the periphery on the core thereby ensuring a continual
flow of economic surplus from the satellite/periphery to the metropolis/center (Eme, 2013). Dependency theory looks at the unequal power relations that have developed as a result of colonialism. In the colonial period, newly industrialized colonial nations expanded into areas that were unclaimed by other colonial powers (Ikwechukwu, 2013). The result was that the natural resources of less-developed nations were used to fuel the colonial nations’ factories. The benefits of this system of relationship accrue almost entirely to the rich nations, which become progressively richer and more developed, while the poor nations, which continually have their surpluses drained away to the core, do not advance, rather they are impoverished. This theory has also been applied to Africa. It is believed that Africa’s poverty is not natural but an engineered position (Matunhu, 2011). Matunhu (2011) maintains that Africa is positioned to specialize in marketing raw material, while the developed world market finished products. Furthermore, the ownership of the means of production in the mining or natural resource extraction sector is in the hands of foreign investors. These foreign investors do not make significant investment in Africa. Rather, they take profits to their home countries. From a dependency perspective, repatriation of profits represents a systematic expatriation of the surplus values created by African labour using African resources.

2.1.4. Institution theory
Institutional economics is an extension of neoclassical theory, which results from cooperation between economists and political scientists studying the role of institutions in economic growth (Demissie, 2014). For natural resources and economic growth, institutional theorists argue that weak governments and corruption are major factors for what is known as the natural resource curse phenomenon. In developing countries with weak institutions, such resources tend to be channeled, if not monopolized, through government, which then becomes corrupted, less responsive to the desires of citizens, and less interested in advancing policies and institutions that create wealth (Vásquez, 2011). Natural resource wealth quite easily can become a curse and cause many problems if the country suffers from certain weaknesses and if there is no pre-based high-quality institutional framework (Kurečić & Seba, 2016). In African cases such as Angola, Nigeria and the former Zaïre, mineral and other natural resources have been linked to systemic corruption and the weakness of state institutions (Basedau, 2005; Kurečić & Seba, 2016).

2.2. Empirical literature
Fearon and Laitin (2003) and Fearon (2005) found that oil revenues play a huge role in weakening state capacity. In other words, their studies showed that oil revenues contributed to maladministration and mismanagement of state funds. Besley and Persson (2010) also made an attempt to examine the effect of natural resource revenues on state capacity and conflict. Their study showed that natural resource-rich countries have a tendency of under investing in state capacity formation and this makes the natural resource countries to be susceptible to civil conflicts and instability. Hodler (2006) found that natural resource-rich countries tended to have low income when fractionalisation was high. Furthermore, it was seen that natural resource countries with high levels of fractionalisation tended to have weak property rights. Melhum et al. (2006) argue that the quality of institutions in a country plays a crucial role in determining whether natural resource revenue will bring development or not. They claim that the presence of natural resources is associated with lower incomes when institutions are grabber friendly, while more resources increase aggregate income when state institutions are investor friendly. The study came to the conclusion that the quality of institutions conditions a resource curse with the presence of poor quality institutions leading to low development.

Kayitare et al. (2015) notes that political parties make promises to citizens through their electoral manifestos on how they will transform a country’s natural resources into sustainable development. Unfortunately, in many countries, these promises are often based on political calculations for electoral victory rather than clear internal policies resulting from internal discussion. Robinson et al. (2006) conducted a study on the political foundations of the resource curse. Their research found that resource booms boost resource misallocation in the rest of the economy by increasing the value of being in power and providing politicians with more resources to utilize to
influence election outcomes. According to the study, nations with institutions that promote accountability and state competence gain from resource booms because these institutions mitigate the skewed political incentives that such booms produce.

Natural resource abundance is also associated with higher inequality levels (Gylfason & Zoega, 2003) and less political freedom, which then lead to poor growth and low economic development. Yartey claims that African countries that are natural resource abundant and also having weak institutions tend to be corrupt, and they also have high incidences of civil war (Guenther, 2008). Bhattacharyya and Cuaresma et al. (2010) did an econometric study using panel data and revealed that the quality of institutions determined the relationship between resource abundance and corruption. The study concluded that resource revenue was correlated with corruption in states with poor institutions. Aslaksen (2011) did an econometric study that used a large data set and showed that the effect of natural resources on corruption and development was non-uniform across different resource types, and so it its conditioning on the effectiveness of institutions. In particular, an improvement in democracy score lowers the negative effect of mineral wealth on corruption, but not the effect of oil on corruption.

According to Oyinlola et al. (2015), there is a positive association between natural resource richness and economic growth, as well as a beneficial influence of political stability, rule of law, and voice and responsibility on economic growth in African countries. Furthermore, the relationship between natural resources and institutions demonstrated that economic progress is triggered by excellent governance in the presence of abundant natural resources, not by the simple quantity of resources. Alpha and Ding (2016) examined the influence of Mali's natural resource endowment on economic growth from 1990 to 2013 and found that natural resource export had a favorable impact on economic growth. However, when natural resource exports are combined with corruption, economic growth suffers. According to Kaznacheev (2017), resource economies with quality political institutions manage their revenues and attain economic growth and social development more effectively than those with inadequate political institutions.

According to Andersen and Aslaksen (2013), oil riches allow authoritarian dictators to stay in power longer. Kimberlite diamonds have a similar impact, according to their research, whereas alluvial diamonds and other minerals can shorten the lives of authoritarian leaders and parties. Natural resource rents, according to Bueno de Mesquita and Smith (2010), assist authoritarian leaders in both avoiding and surviving revolutions. Dunning (2008) proposes a different type of conditional influence, arguing that oil stifles democratization in countries with low levels of inequality while hastening it in countries with high levels of inequality by assuaging wealthy elites' fears that democracy will result in the expropriation of their private assets. The timing of the oil boom, according to Smith (2007), is a critical intervening variable. It is unlikely to promote stability if it occurs before an authoritarian government has created a strong governing party or coalition; if it occurs after the development of a strong ruling party or coalition, it is more likely to foster authoritarian stability.

Arezki and Brüchner (2011) did a study that looked at how oil revenue affected state performance and development in non-democratic states. The study showed that oil revenue was correlated with corruption and this was particularly witnessed in countries that had high state participation in oil production. The study also showed that the effect of oil revenue on corruption was low and absent in countries where the oil industry was privately owned. Some studies have shown that more competitive electoral institutions promote greater transparency and accountability of public officials (Montinola and Jackman as cited in Mohdavi, 2019), while freedom of information laws and a free press can work to increase the probability and cost for public officials of getting caught engaging in corrupt behavior (Besley as cited in Mohdavi, 2019). Brollo et al. (2013) use a regression discontinuity design to examine the effects of transfers from the Brazilian federal government to local governments, concluding that a ten percent increase in these windfall-like transfers is associated with a ten to twelve percentage point increase in corruption detected by
the federal government’s random audit program. A second study of Brazilian municipalities (Caselli & Michaels, 2013) discovered that plausible exogenous increases in oil revenues were associated with increased spending on public goods and services; however, much of this money went missing and was most likely absorbed by a combination of increased patronage and top-level embezzlement.

Kelley (2016) argued that bad institutions and associated dysfunctions are both the cause of the presence of an intensive natural resource sector and the cause of their political and economic underdevelopment. In the DRC, Shekhawat (2009) found that corruption continued to destabilize the economy and administration. The findings from the study showed that state resources were being siphoned off to fund election campaigns and private accounts. The study also found that in the DRC, “between 60 and 80 per cent of the customs revenues were estimated to be embezzled, a quarter of the national budget was not properly accounted for, and millions of dollars are misappropriated”. The abuse of office for individual gains was noticed by clerical staff to the highest members of government. Henri (2019) investigated the institutional and economic indicators that are more negatively affected by natural resource rents in Africa. The results showed that the most institutional problems caused by natural resources rents are by order: corruption; problem of rule of law or justice; inefficient public administrations; bad regulation; lack of voice and accountability; political instability. Natural resources rents also cause volatility of GDP per capita, leading to low level of physical and human capital accumulation. The study concluded that African countries should promote good governance and diversify their economies. According to Alhassan and Achaamah (2021), the interplay between political system and resources reveals that democracy increases the favorable effects of natural resources on economic growth, while the results are mixed in the short run. Specific natural resource rents (oil, mineral, and forest rents) have a favorable impact on sectoral growth. Oil, mineral, and forest rents interacted with the political regime to drive agricultural expansion. The research found that a democratic system is essential for the country’s successful resource use and long-term economic prosperity.

3. Methodology

3.1. Data sources

This study makes use of secondary data. Information and statistics were sourced from the World Bank publications, and Economist Intelligence. The study used panel data, which spanned from 2000 to 2019. The study selected the following African countries: Angola, Central African Republic, DRC, Equatorial Guinea, Gabon, Libya, Nigeria, Sierra Leone, Sudan and Zimbabwe (US Committee On Foreign Affairs, 2013). These countries were chosen because they share some of the characteristics that resource cursed countries exhibit. Common to many resource-rich countries are stagnant growth, poor social welfare indicators, high levels of poverty, inequality, and unemployment, and social anomy in the midst of extraordinary wealth (Sudhir, 2011). These characteristics are found in the countries selected in this study. Furthermore, all of these countries are aptly described as being “resource-cursed” (Aragbonfoh, 2015).

3.2. Model specification

This study adopts Masi, Savoia and (2017) model. Masi et al. (2017) used panel methods covering the period 1981–2011 and 98 developing countries to test the relationship between resource rents, fiscal capacity and political institutions. The adoption of this model is appropriate for this study because the African countries under investigation in this study are developing countries. A comparison with developing countries, who share Africa’s poor economic status, is instructive. Based on the model employed by Masi et al. (2017) model, the study developed the following regression model:

\[ EG_{it} = \beta_0 + \beta_1 R_{it} + \beta_2 GDP_{it} + \beta_3 PP + \beta_4 PS_{it} + \beta_5 VA_{it} + \epsilon_{it} \]  

(1)
where EG is efficient functioning of government, RR is Resource Rents, GDP is Gross Domestic Product, PP is political participation, PS is political stability and $\epsilon_i$ is an error term. The description of the variables is presented in Table 1 below.

### 3.3. Estimation techniques

The study followed an estimation process that was done by Erkisi and Boga (2019) and Oyelami and Ogundipe (2020). The study subjected its data to several pre-tests in order to determine the correct estimation technique. The preliminary tests that were done are cross dependence, unit root tests and cointegration tests. After the presence of cointegration was detected, the study proceeded to conduct a panel cointegration estimation using the PMG estimator. In addition, a substitute cointegration method (Fully Modified Ordinary Least Squares) was used to confirm the validity of the PMG estimator.

#### 3.3.1. Cross sectional dependence

Cross-sectional dependence is an important preliminary test that a study should conduct before performing a panel data analysis (Tugcu, 2018). Ignoring cross dependence destroys the efficiency gains of operating with a panel and results in inconsistent estimators of the parameters, consequently undermining the theoretical inference in panel-data models (Banerjee and Carrion-i-Silvestre 2011 as cited in; Burdisso & Sangia como, 2016). In the case of the existence of cross-section dependence between the units, the second-generation panel unit root test, otherwise, the first-generation panel unit root test will be employed (Fatma & Ari, 2013; Erkisi & Boga, 2019).

#### 3.3.2. Unit root tests

The second step was to examine the stochastic characteristics of the data. Hence, the study conducted some unit root tests. The preferred technique was the Levin, Lin and Chu, and LM, Pesaran and Shin tests. These are first-generation unit root tests. They were chosen after it was ascertained that there was no cross dependency in the sample.

#### 3.3.3. Cointegration

After ascertaining the order of integration levels of variables, possible cointegration among variables must be checked. The reason for performing cointegration tests is to examine whether there is a long-run association amongst the variables. The Pedroni panel cointegration test and the Kao panel cointegration test were applied to test the cointegration among variables.

#### 3.3.4. Causality

Apergis and Payne (2009) state that when variables in a model are found to be having a long-run association (cointegration), it shows the possibility of causality. In a bid to ascertain whether or not there was a causal link between the variables, the procedure proposed by Dumitrescu and Hurlin (2012) for testing Granger causality in panel datasets was applied. This test is a simple version of

| Variable | Description and unit of measurement | Source |
|----------|-------------------------------------|--------|
| GDP      | Gross domestic Product              | World Bank |
| EG       | Efficient functioning of government | Economist Intelligence |
| PP       | Political participation             | Economist Intelligence |
| RR       | Resource rents                      | World Bank |
| PS       | Political stability                 | Economist Intelligence |
| VA       | Voice and Accountability            | Economist Intelligence |
the Granger (1969) non-causality test for heterogeneous panel data models with fixed coefficients (Fatma & Ari, 2013). The inappropriate assumption of causal homogeneity in the Granger causality test based on panel VECM, and many other panel causality test methods, could be inappropriate in panel context. The study, therefore, had to use the Dumitrescu and Hurlin (2012) test, which is suitable for panel data. The Dumitrescu and Hurlin (2012) test is mainly devised for heterogeneous panel data and it has shown to produce reliable and unbiased results when there is a small sample and cross-sectional dependence (Oyelami & Ogundipe, 2020).

3.3.5. ARDL
After confirming that the five variables are not integrated of an order equal to or greater than I(2) and that the series are cointegrated, the next step is to estimate the panel ARDL regression through a Pooled Mean Group (PMG) estimation. The ARDL model is a regression model that combines the Autoregressive (AR) and Distributed Lag (DL) models. AR model is a model where the dependent variable $y_t$ is influenced by the variable itself in the past $y_{t-j}$ (Ardiansyah et al., 2021). The ARDL ($p, q$) model is specified by the following equation:

$$Y_t = \sum_{j=1}^{p} \psi_{ij}Y_{t-j} + \sum_{j=0}^{q} \delta_{ij}X_{t-j} + \vartheta_i + \epsilon_t$$ (2)

where $i = 1, 2, \ldots, \text{stands for the country}; t = 1, 2, \ldots, \text{for the time period}$. The ARDL model has a reparameterization in EC form:

$$\Delta Y_t = \vartheta_i (Y_{t-1} - \psi X_{t1}) + \sum_{j=1}^{p-1} \psi_{ij} \Delta Y_{t-j} + \sum_{j=0}^{q-1} \delta_{ij} \Delta X_{t-j} + \vartheta_i + \epsilon_t$$ (3)

The parameter $\vartheta_i = (1 - \sum \psi_{ij})$ is the error-correcting speed of the adjustment term, which captures the speed of adjustment for any deviation from the long-term relationship. The value of this parameter is expected to be significantly negative under the prior assumption that the variables show a return to long-term equilibrium (Smolović et al., 2020). In the case of a zero value, there would be no evidence of the existence of a long-term relationship.

3.3.6. FMOLS
After confirming the long-run equilibrium relationship between variables by the cointegration test, the long-run coefficients are estimated by the Fully Modified Ordinary Least Squares (FMOLS) estimation technique. The study used the FMOLS because it corrects the inconsistencies that are caused by endogeneity and serial correlation of the regressors (Burdasso & Sangia, 2016). Furthermore, the FMOLS technique can also control for a number of problems such as measurement errors, eliminates sample bias, corrects for serial correlation, and allows for heterogeneity of the long-run parameters (Afawubo & Couchoro, 2017). It is expressed as follows.
\[ \beta_{\text{FMOLS}} = \left[ \sum_{i=1}^{T} \sum_{t=1}^{N} T(x_t - \bar{x}_t)^{-1} \left[ \sum_{i=1}^{T} \sum_{t=1}^{N} T(x_t - \bar{x}_t) \right] y_t^i + T \right] \]

\( y_t^i \) represents the serial correlation term. To overcome the endogeneity, \( y_t^i \) changes into \( y_t^i. \)

4. Presentation of results

4.1. Correlation
The data were first tested for correlation amongst the independent variables. This was done to test if there is multicollinearity on the independent variables. Results are shown in Table 2 below.

Table 2 shows that correlation results indicated that there was no strong association amongst the independent variables that were used in the study. This may be an indication that there is no multicollinearity in the independent variables.

4.2. Cross dependence test
The cross-dependence test was performed and the results are shown in Table 3 below.

The results show that the null hypothesis of no dependency cannot be rejected. This is shown by the p-values of which are higher than 0.05. Non-rejection means that the residuals are not cross-sectionally dependent.

4.3. Unit root
This study conducted some stationarity tests to check if statistical properties of a time series do not vary with time. The Levin, Lin and Chu, and Lm, Pesaran and Shin tests were used. Results are shown Table 4 below.

Results from the unit root tests show that PP, PS and EG were stationary at levels. Results further show that GDP, VA and RR have unit root. The presence of stationarity in the data implies that there might be an existence of a long-run relationship. This prompted the study to perform a cointegration test in order to examine whether (or not) there was a long-run association amongst the variables.

4.4. Cointegration test
To test whether there is a long-run relationship between variables in the data, the Pedroni Panel Cointegration Test and the Kao panel cointegration test were used to determine the result.

Results show that results show that there is cointegration amongst the variables. The Group ADF statistic, Group PP statistic, Panel ADF statistic and Panel PP statistic showed that there is cointegration. Their p-values are below 0.05, which implies the rejection of the null hypothesis of no cointegration. This shows that the variables are cointegrated. In order to confirm the results from the the Pedroni test, the Kao panel cointegration test was performed. Table 6 shows the results from the Kao Panel cointegration test.

The Kao cointegration test confirmed the existence of a cointegrating relationship among the variables. This upholds the Pedroni tests results and validate that there is a long-run association.
The next step was to test the causality between the variables using the Dumitrescu and Hurlin (2012) for testing Granger causality and then estimate the long-run coefficients using the Fully Modified Ordinary Least Squares (FMOLS) estimation technique.

4.5. Causality and ARDL results

Results from by Dumitrescu and Hurlin (2012) for testing Granger causality in panel dataset were applied and results are shown in Table 7.

Results show that there is a unidirectional link between EG and GDP. The relationship moves only from EG to economic growth and not vice versa. The same can be said for PP and EG. The link is a unidirectional link in that it moves only from EG to political participation and not vice versa. For PS and EG, the relationship is a unidirectional link in that it moves only from political stability to EG and not vice versa. The same can be said for VA and EG. The relationship is a unidirectional because it moves only from VA to EG and not vice versa. Last but not least, there is evidence for causality running from EG to RR. The Granger causality test results indicate that EG (efficient functioning of government) causes resource rents (RR). Tables 8 and 9 show the long-run elasticities.

The ARDL results in Table 8 show that there is a positive relationship between GDP and EG. This link is, however, a unidirectional link in that it moves only from EG to economic growth and not vice
versa. Kaufmann, as cited in Mira and Hammadache (2017), state that the existence of reverse causality, from income levels of governance, is feasible if states with high incomes could adopt good policy governance, improving states institutions, government efficiency, rule of law and control of corruption. Growth may increase confidence in the public workforce and this encourages the public workforce to support government policies and work for larger good. When the government is performing better, the economy is likely to perform well. The performance of state institutions ensures that investor-friendly policies are adopted and businesses are promoted. This boasts domestic production and consequently improving economic growth. The results

### Table 7. Causality test results

| Null hypothesis                      | F-statistic | Prob  |
|--------------------------------------|-------------|-------|
| EG does not Granger cause RR         | 7.82285     | 0.0043|
| RR does not Granger cause EG         | 2.59631     | 0.1012|
| GDP does not Granger cause EG        | 2.17138     | 0.1258|
| EG does not Granger cause GDP        | 4.62014     | 0.0150|
| PP does not Granger cause EG         | 1.90115     | 0.1612|
| EG does not Granger cause PP         | 3.05725     | 0.0569|
| PS does not Granger cause EG         | 2.86791     | 0.0673|
| EG does not Granger cause PS         | 0.12892     | 0.8794|
| VA does not Granger cause EG         | 0.59071     | 0.5582|
| EG does not Granger cause VA         | 0.03815     | 0.9626|

### Table 8. PMG results (long run)

| Variable | Coefficient | Std error | t-statistic | Prob  |
|----------|-------------|-----------|-------------|-------|
| GDP      | 0.0428      | 0.0034    | 12.4282     | 0.0000|
| PP       | 3.2400      | 4.3000    | 7.5292      | 0.0000|
| PS       | -0.1681     | 0.0271    | -6.1909     | 0.0000|
| RR       | 0.04340     | 0.0230    | 1.8858      | 0.0658|
| VA       | -0.0356     | 0.0198    | -1.7923     | 0.0798|

### Table 9. FMOLS results

| Variable | Coefficient | Std error | t-statistic | Prob  |
|----------|-------------|-----------|-------------|-------|
| GDP      | 0.529654    | 0.161901  | 3.271464    | 0.0015|
| PP       | 0.013088    | 0.027110  | 0.482762    | 0.6304|
| PS       | 0.075218    | 0.015852  | 4.744931    | 0.0000|
| RR       | 0.605275    | 0.248008  | 2.440547    | 0.0204|
| VA       | -0.030481   | 0.028221  | -1.080054   | 0.2828|
corroborate similar results reported in the literature. In Zimbabwe, poor state performance, corruption and tyranny resulted in decades of economic decline (Cain, 2015; Muronzi, 2019; Zhou, 2021). Mismanagement of state resources has placed DRC among a group of fragile states with the poor economic growth (Henze et al., 2020; Lee-Jones, 2020). In Sudan, corrupt actors effectively captured all aspects of policymaking and all areas of the public service resulting in poor economic performance (Ahmed, 2021; Ardigo, 2020). Other economies such as Equatorial Guinea, Sierra Leone and Gabon have also been affected by mismanagement and poor governance (US Committee On Foreign Affairs, 2013; Human Rights Watch, 2017; Javed, 2020).

Results show that political participation has a positive effect with efficient functioning of government. This is a reasonable outcome. This link is, however, a unidirectional link in that it moves only from EG to political participation and not vice versa. When there is political participation, the public can act as a check and balances player and voice their concerns against government underperformance (Menocal, 2014; Rakabe, 2019). Furthermore, public political participation can allow the government to listen and take into consideration the views of the public when making and implementing policy.

Results show a negative relationship between political stability and efficient functioning of government. This link is, however, a unidirectional link in that it moves only from political stability to EG and not vice versa. This is a reasonable outcome. When a country is politically unstable, we expect the functioning of government to be poor. When there is instability the government is likely to be unstable as well. The establishment of a politically stable environment is crucial for good governance and government effectiveness. The guarantee of political stability are fundamental prerequisites that the government must ensure for efficient functioning of a government. The findings of the study are consistent with empirical literature. African countries are faced with a problem of poor state performance and corruption, and this also leads to political instability and civil war (Adeseso, 2018). Abu et al. (2015) and Khan and Farooq (2019) also report the negative effects of political stability on government effectiveness and development.

Results show a negative relationship between the efficient functioning of government and voice and accountability. This link is, however, a unidirectional link in that it moves only from VA to EG and not vice versa. When the government is not accountable to anyone, it will have no incentive to perform well. When the government officials and those in power are not answerable to anyone, they will do as they please and government performance will decrease. When citizens have the freedom to express themselves and are able to make the government account, the government is likely to be efficient. In an IGC-sponsored study, Dasgupta (2016) concurs and shows that democratically mobilised communities might be able to put more pressure on their elected representatives and ensure better delivery of services. “democratically mobilised” villages, characterised by extensive civic engagement in the activities of the village council, place greater pressure on local leaders and the higher-level politicians to which they are connected to deliver services. Earlier studies, such as that of Brewer, Gene et al. (2007), have shown that both accountability is

### Table 10. PMG results (short run)

| Variable | Coefficient | Std error | t-statistic | Prob |
|----------|-------------|-----------|-------------|------|
| GDP      | 0.172871    | 0.024067  | 7.183054    | 0.0000 |
| PP       | 0.600831    | 0.086030  | 7.150181    | 0.0000 |
| PS       | −0.771572   | 0.193054  | −3.996665   | 0.0000 |
| RR       | 0.145781    | 0.021142  | 6.895446    | 0.0000 |
| VA       | 0.140452    | 0.022838  | 6.140983    | 0.0000 |
| ECM      | −0.221618   | 0.026702  | −8.299760   | 0.0000 |
significantly correlated with government effectiveness. In other words, countries with higher scores on the accountability have higher government effectiveness.

Results show a positive relationship between the efficient functioning of government and resource rents. There is evidence for causality running from EG to RR. The Granger causality test results indicate that EG (efficient functioning of government) causes resource rents (RR). This is quite a reasonable outcome. The efficient functioning of government shows that government and its institutions are important in determining the overall performance of the economy including resource extraction. When government performs for the general good, it attracts more investment. The reverse is true; patronage politics distorts the economy and diverts investment away from more productive sectors. Some studies have found that countries with proper governance structures are able to attain and sustain high growth rates. Based on (2005) finds some empirical support for the idea that institutions are particularly important in the context of natural resources but do not investigate what institutions are important.

Furthermore, the results are in line with Wiens (2014) and Masi et al. (2017) who revealed that resource abundance does not lead to worse development outcomes, if a country has the “right” institutions. African countries have suffered because of political reasons. For example, Zimbabwe’s lack of effective regulatory mechanisms and the inability to effectively monitor key mining activities and rein in illegal mining have reduced output in volume terms, in addition to wiping away Zimbabwe’s competitive advantage compared to its neighbouring states (Institute for Security Studies, 2020; Mahonye & Mandishara, 2015). In Central African Republic, political manipulation coupled with violent conflict different armed groups have stunted economic development, despite the country’s rich natural resources, which are well supplied with at least 470 mineral occurrences (Richiello, 2018). Nigeria, Equatorial Guinea and DRC also face similar problems (Freehills, 2020). Aspirant autocrats use natural resource rents to accumulate power for themselves (Harvey, 2021). It can thus be said that Africa’s resource curse is largely the result of a leadership deficit in the countries concerned Fabricius (2017). Few African countries have taken a departure from this path. For example, Botswana is commonly cited as a deviant case of the natural resource curse (Durns, 2014; Limi, 2006; Pegg, 2012; Sebudubudu & Mooketsane, 2016). The short-run results are displayed in Table 10.

The short-run results show that the ECM coefficient is negative and significant. This shows that there is a cointegrating relationship between dependent variable and the regressors. Results further show that GDP, Political participation, Resource rents and Voice and Accountability have a positive association with economic growth over the short term. Political stability impacts the efficient functioning of government negatively over the short run.

5. Conclusion and Recommendations
This paper analysed political aspect of the resource case in selected African states. The paper drew from the fact that the African region has extensive (untapped) natural resources deposits that, if utilised, can promote sustainable economic development. But despite the presence of these natural resources, the African region is poverty-stricken and still under-developed. Using natural resources to build sustainable economic development is a challenge faced by many African governments. Literature identified politics as among the factors that affect Africa’s capacity to invest revenue from natural resources. Studies have shown that there are close links between politics and the management of extractives. Resource-rich countries with fragile democratic institutions tend to have weak economies. Unable to control corruption and manage revenues wisely, the government is unable to capture the benefits.

Results from the study showed a positive relationship between efficient functioning of government and resource rents. There is also evidence for causality running from efficient functioning of government to resource rents and not vice versa. This shows that government performance is crucial for better performance in the natural resource extraction sector. Based on the findings, this
study recommends that governments in African countries should improve on governance and the way the public sector institutions function. This study argues that resource flows from extractive industries can be a lifeline for poor African countries, helping to fund growth and development needs. However, in order to capture the benefits of natural resource abundance, African countries need to develop their governments. Harnessing the weak and politically fragile public institutions is important in order to kick start markets. The effective functioning of government institutions can be strengthened by eliminating corruption, stabilising property rights, and investing in fiscal capacity.

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