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# Political Economy of the Resource Curse in Africa Revisited: The Curse as a Product and a Function of Globalised Hydrocarbon Assemblage*

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*This paper revisits the resource curse thesis that explains the tendency of natural resource rich economies in developing world (including in Africa) to perform poorly economically and on other development indicators. It argues that the exiting conceptualisation of the curse suffers from methodological nationalism where state weaknesses/strengths is credited as the main factor that conditions and shapes natural resource impacts. Such analysis disregards how external actors and structures interact with national and local politics to shape development. Using network approach, this paper postulates that the curse is a tendency conditioned and moulded by a 'globalised assemblage' – interactions between and among states, national and local politics, transnational interests, technologies and globalised structures and actors.*

***Keywords:*** *resource curse, relational, network, assemblages, development*

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## Introduction

The resource curse has initially been used to explain the tendency for natural resources rich economies, mostly in the developing world to perform poorly economically (Stevens 2015; Auty 2001, 1993; Sachs and Warner 2001). It has since been extended to include how natural resource windfalls mediate and are implicated in development challenges such as governance, corruption, government borrowing, Dutch Disease (local currency appreciation), neglect of manufacturing and agriculture, environmental degradation and conflict (Watts 2010, 2009; Alexeev and Conrad 2009; Brunnschweiler and Bulte 2008; Heum 2008). Some researchers described the inverse connection between resource abundance and poverty as a 'paradox of plenty' (Ploeg and Venables 2011; Karl 1997) since traditionally, natural resource endowment is assumed to provide development advantages (Rosser 2006; Wright and Czelusta 2004; Krueger 1980). Indeed, prior to the 1980s, this mainstream view on resources and development persisted. For instance, the geographer, Norton Ginsburg noted that a country's ownership of natural resources was expedient for an accelerated economic growth (Rosser 2006; Higgins 1968; Ginsburg 1957). Development theorist, Rostow (1960) also maintained that natural resource endowment should help developing countries to transit from underdevelopment to industrialisation, replicating the experiences of developed countries (Rosser 2006). Neoliberal economists like Krueger (1980) in the 1980s advanced a related argument, suggesting that natural resources can facilitate industrialisation, through providing investment funds and domestic market expansion (Rosser 2006).

Concerns with natural resources and their role in development had however been raised earlier. Davis (1995) posited that in 1859, the economist John Elliot Cairns earlier noted that the Australia's economy was adversely impacted, with the local currency appreciating due to the gold rush in 1850s. A few economists like Prebisch (1950), Singer (1950) and Hirschman (1958) indeed however prior to the 1980s challenged the notion that resource abundance should be sufficient for development. The structure of the global economy, characterised by declining terms of trade for commodities relative to manufactured goods, price volatility and limited linkages between natural resource extraction and national economies place these countries in structural dependency (Rosser 2006; Bulte et al. 2005).

Since the 1980s, Auty (1993), Gelb (1988) and others have challenged the conventional wisdom that natural resources are inevitably positive for

development. Some researchers argued that resource abundance in the developing world, especially Africa is a curse instead of a blessing since these countries have an increased tendency of poor growth and poverty, political instability, environmental degradation and violent conflicts (Ross 2013; Collier 2010; Karl 2003; Auty 2001, 1997). These economies experience limited diversification, prone to rent-seeking, corruption and exorbitant elite spending (Torres et al 2013; Bulte et al. 2005).

Some studies however, noted that although the economic growth of the natural resource rich countries has been erratic, it is akin to the resource poor ones (Ross 2012). Others blame the over dependence on volatile windfalls prices which adversely impact economic policy and planning (Alexeev and Conrad 2009; Brunnschweiler and Bulte 2008). Wright and Czelusta (2004) observed that countries like the US, Australia and Sweden, with advanced technologies exploited their natural resources to galvanise industrialisation. Thus, though the curse thesis provides a general picture, it is a tendency, not a law (Auty 1993). It is created through interaction between and among social, economic, political actors and the natural resources. Existing explanation of the curse have not satisfactorily account for external political and economic environments (Rosser 2006), and how their interactions with national and local institutions and actors mediate development in resource abundant economies.

In view of the above, this paper employs 'globalised assemblages', interactions within and among resource rich and exporting economies, transnational companies, national and local politics, technologies and globalised structures and actors as a new entry point to challenge and problematize the existing framing of the curse. It posits that the dimensions of the curse and manifest across space is conditioned and a function of globalised assemblages. While this review is generally based on Africa, it acknowledges other resource rich countries in the developing world experience almost comparable challenges. Section two analyses the natural resource abundance and economic growth. High-priced economies, the Dutch Disease, price volatility and debt is examined in section three. Rent seeking and entrepreneurial development is examined in section four. Section five examines natural resource, industry and agriculture development. Natural resources endowment and poor governance is analysed in section six. The conclusion argues that the curse is a product and function of a 'globalised assemblage' – interactions between and among states, companies, institutions, politics, technologies and globalised actors and structures across space.

제목 대소문자로 수정했습니다. 이하 확인...

## Natural Resource Abundance and Economic Growth

Based on the curse thesis, one of its dimensions is the inverse relationship between natural resource abundance and economic growth in the developing countries (Africa inclusive). Gelb's (1988) cross-country analysis of oil exporting economies (Algeria, Indonesia, Nigeria, Venezuela, Ecuador and Trinidad and Tobago) highlighted the negative connection between natural resource and economic growth. The data revealed that resource windfalls during the booms periods of 1974 – 1978 and 1979 – 1981 were harmful to economic growth of those countries due to price volatilities, affecting growth and planning.

Subsequent study by Auty (1993) on hard mineral economies (copper, bauxite and tin) revealed that despite significant investments in these countries higher than in the low-income non-mining ones between 1971 and 1983, the mineral economies perform awfully. The GDP growth per capita in mineral economies was -1% compared to +0.7% for non-mineral ones (ibid.). Sachs and Warner (2001, 1997, 1995) also noted poor economic performance in natural resource exporting countries in the developing world. Sachs and Warner (1995) posited that, based on data from 97 countries, economies with a high ratio of natural resource to GDP have lower growth during subsequent periods, even after controlling trade policy, government efficiency, investment and initial GDP. Sachs and Warner's (1999) study on some resource rich countries in Latin America showed declining GDP per-capita. Sachs and Warner (2001, p. 835) noted inverse relationship between natural resource abundance and export contribution to economic growth, especially from manufactured goods due to a high priced of local industrial products. Export sectors can be rendered uncompetitive due to an appreciated local currency.

Per capita growth in resource rich economies can be reduced by discrete negative commodity price shocks (Dehn 2000). Price volatilities can be attributed to change in supply and inelasticity of demand and supply of oil products on the markets (Ross 2012). Volatility in oil price affects the revenue accruing to the government. Where prices rise, government revenue increases, while downward swings affect earnings negatively (Moss 2011). Price volatility and plundering reduce investment in the economy to stimulate growth.

There are some outlier natural resource rich economies in the developing countries, like Botswana which have high growth due to complexity of factors such as budgets that regulates spending and elites' commit to national

development (Collier 2008; Samatar 1999). Adherence to spending regulations ensures that the state can direct windfalls into productive sectors and promotion of economic diversification by processing some of the natural resources locally. Local processing can create linkages to other sectors of the economy as well as employment creation. Khama (2016, p. 16) noted that for sustainable development in mineral economies, the revenues derived from non-renewable resources should be ploughed in other assets that will generate future income. In Botswana, the government's finance policy specifies that revenues derived from diamond are invested in other assets or sectors (Khama 2016). This is to preserve the country's asset base; and to provide avenues for the income generation through ensuring that recurrent (non-investment) spending are financed from recurrent (non-mineral) sources (Khama 2016, p. 11). Although Botswana's mineral revenues are paid into a Consolidated Fund (general revenue pool), the windfall is monitored through a Sustainable Budget Index (SBI). The SBI is the ratio of non-investment spending to non-mineral revenues. An SBI of more than 1 means that non-investment spending is being financed in part from mineral (non-recurrent) revenues. But a SBI of less than 1 can either means that mineral revenue is being saved or spent on public investment while recurrent spending is financed by non-mineral (recurrent) sources. An SBI of less than one is viewed as sustainable. The data from Botswana's SBI showed that it has fluctuated in the past but since 2006, it is below 1, as a share of spending on development of health and education (Khama 2016, p. 16). Despite Botswana's progress in the use of diamond resources, its development has been complex (Mogalakwe 2003). It is a class project, mobilised around a social group, nurtured systematically by its politics through investment policies, fiscal discipline and good institutions. Questions still remain whether Botswana's economic diversification is adequate.

There are some cases also where country's GDP increases has been attributed to natural resources windfalls. Mideksa (2013) posited that since 1974, 20% of Norway's annual GDP per capita increase was due to natural gas and oil. Since Norway began oil produce in the 1970s, it has not suffered from inflation and currency exchange appreciation. In other words, oil cannot always a curse. Norway's Government Pension Fund has helped it in dealing with challenges associated with oil windfalls. Thus, in analysing the impact of natural resources on development, one should also recognise the opportunities, like extra capital for investments (Mideksa 2013; Mehlum et al. 2006). Mehlum et al. (2006) noted that sometimes, the curse is conditioned by poor institutions at the time of resource discovery. Norway has been

forward-looking by keeping the oil revenue invested outside the country into future generations and pension funds instead of consuming it through tax cuts or direct transfers. Given the differences in experiences of countries, the connection between natural resource abundance and economic growth is more complex. One should analyse events before, during and after the resources revenue comes on stream (Collier 2010), and how the sector interacts with other and the global economy, and how this impacts national economies, including the local currency.

## Dutch Disease, high-priced economies, price volatility and debt

The Dutch Disease, is the tendency of a country's local currency to appreciate due to natural resource windfall inflow into its economy, resulting in cheap imports and subsequent shrinkage of local manufacturing and tradable sectors (Sala-i-Martin and Subramanian 2012, 2003). This scenario is named after the Dutch experience in the 60s where the influx of revenue from natural gas sale from the North Sea resulted in local currency appreciation and industry decline (Ploeg and Venables 2009; Corden and Neary 1982). Sachs and Warner (2001) posited that natural resource rich economies can be high-priced, and adversely affect export-led growth.

Ross (2012) and Corden and Neary (1982) identified two causative drivers of the Dutch Disease – 'resource movement effects' and 'spending effects'. The former involves rise in cost of manufactured and agriculture products due to drawing of capital and labour from those sectors into to the booming resources sector. 'Spending effect' is when imports become cheaper and exports uncompetitive due to local currency appreciation. Maass (2009) posited that as the local currency appreciates due to foreign currency influx from resource windfalls, foreign products become cheaper, while domestic ones become more expensive. Gelb (1988) noted that Nigeria, Ecuador, Venezuela and Trinidad and Tobago suffered the Dutch Disease during their oil booms. Gabon became 'a caricature of food dependency' during its oil boom, with most its food being imported (Oliveira 2007).

Despite the challenges associated with local currency appreciation, Ross (2012) noted that services such as education, health and security that cannot be imported are often not affected significantly. However, sustaining them can be problematic when the boom subsides and revenue declines. Karl (1997) argued that the Dutch Disease is non-deterministic since the extent to which it manifests in a country is dependent on policies and structures vis-à-

vis how natural resource windfalls are utilised. Botswana's experience with diamond is an example of how government policies and institutions can partially helped minimise the impact of the Dutch Disease. Sterilisation of inflow lessened the negative impact of diamond windfalls on Botswana's economy. It entails fiscal prudence where windfalls that go into recurrent expenditure is limited to reduce their immediate translation into aggregate demand and creation of inflationary environment by investing windfalls into heritage fund and capital assets (Stevens 2003). Sterilisation interventions are monetary policies use to ensure that large foreign exchange inflows from natural resources have limited effect on the domestic monetary base (Mannathoko 2015). The instruments can include increasing reserve requirements, shifting government deposits from commercial to central bank, sale of debt instruments in open markets and foreign assets investments (Mannathoko 2015, p. 2). This can reduce exchange appreciate and inflationary environments to ensure stability and export growth. But Mannathoko (2015) argued, sterilisation in Botswana had fiscal cost because the effort to lower or maintain the value of the local currency amidst market pressure for currency appreciation, via purchase of foreign assets with lower yields compared to high-yield domestic liabilities is problematic. Interest cost paid on the domestic debts tend to exceed interest earned on foreign assets, thus sterilisation can be unsustainable as commodity prices continue to fall. How much windfall a country can accrue for its development is dependent on volatile world commodity prices and the political elites' willingness and ability to avoid wasteful expenditure and national debt.

Based on the curse thesis, natural resource rich countries can accumulate huge debt from exorbitant public expenditure and corruption since resource windfalls have 'fetish appeal' (Watts 2009; 2003). Because of this flawed appearance of endless wealth, the political elites in these countries seemingly disregard commodity price volatilities and negative shocks, and how this affects revenue inflow into an economy. Often, the national expenditure is based on global oil market forecasts which are erratic, characterised by downward and upward swings (Gelb and Grasmann 2010). Meanwhile spending increases during the boom periods with regards to provision of social services are difficult to reverse in the bust times (Collier 2008).

Global oil price projection is challenging due to oil price inelasticity, with regards to both demand and supply. Smith (2009) likened the oil market to a mayhem that is always in turmoil. For instance, between 1998 and 2008, the oil prices slipped to as low as $12 per barrel in December 1998 during the Asian financial crisis, it stabilized around $30 between 2000–2004, increased

to US$147.50 by mid-2008, but dip further below $40 before the end of 2008 (Smith 2009, p. 145). Collier (2010) noted that between 2008 and 2009, oil prices fluctuated between US$65 to US$120. These oil price and revenue volatilities often subject the oil exporting countries to uncertainties that can destabilise their economic policy and planning. Sudden oil revenue inflows into an economy can also overwhelm the government's ability to manage its expenditure (Oliveira 2007).

Natural resource windfall volatility has temporal dimensions. During peak production of natural resources, a country's revenue is likely to increase (Ross 2012; Ploeg and Venables 2011; Humphreys et al. 2007; Radon 2007). This however cannot be sustained due negative shocks. Other sources of volatility include production changes, speculation, conflict, oil embargos, and/or deliberate policies of OPEC (Organisation of the Petroleum Exporting Countries) to reduce production (Ross 2012; Collier 2010; Smith 2009). Drops in oil supply due to conflicts in Nigeria and Libya resulted in oil price hikes in 2011 (El-Katiri et al. 2014). Volatility in oil price is related to an inelastic demand and supply. Inelasticity relates to a situation where the supply and demand for a good/service is indifference to price changes. With regards to oil, consumption remains same whether there are increases or decreases. Consumers cannot easily adjust life styles. Inelasticity exists because petro-states do not easily adjust supply to the global market since they need the revenue to finance their developments (Ross 2012). The inelasticity is also conditioned by longer term investment and huge capital outlays to increase oil production in the short term to offset price surge (Ross 2012).

During oil boom, the elites in some of the oil rich economies increase expending in recurrent expenditures instead of saving or investing (Moss and Young 2009). Price and revenue volatility can however destabilise spending and put economies into debt since once spending on social services are set into motion, it is difficult or even impossible to reverse (Moss and Young 2009). Since natural resource windfalls can be cyclical, governments can be forced to borrow to finance services during downward swings. Unlike some natural resource poor countries that depend on the International Monetary Fund (IMF), the World Bank and aid, which often required fiscal discipline conditionalities, the oil rich countries can borrow from the capital markets and emerging economies like China. China's engagement with these natural resource rich economies is not often predatory however. The Chinese government provided infrastructure in some African countries like Nigeria and East Africa which are needed in exchange for natural resources

(Carmody 2011). There is a Chinese-funded railway linking the East Africa sub-region.[1] But some authors refer to these as the new scramble for Africa led by China (Carmody 2011; Ghazvinian 2007), where natural resources like oil, diamond and gold are used as collateralised loans for infrastructural development. Loans are sometimes used to lock-in oil before it is extracted (Bridge and Le Billion 2013). Collier (2010) noted that China is purchasing natural extraction rights in exchange for infrastructural projects in some African countries. This is criticised as budget bypass strategies, often done in secret and can result in corruption. Some of the countries borrow against oil since it is the main source of revenue (Collier 2010; Humphreys et al. 2007). In cases, where projected revenues for loan payments are not satisfied, the government had to borrow to finance development and debt payments, reinforcing an indebtedness cycle. The country can become debt-trapped (Collier 2008). Profligate borrowing against oil windfalls can result in enormous national debts (Chindo et al. 2014). Debt and rent-seeking can hinder entrepreneurship in the resource rich economies.

## Rent-seeking, education and entrepreneurial development

Rent is the reward or return from a natural resource located on land (Ghazvinian 2007; Stevens 2003). Though rent can be legitimate due to ones' right to natural resources [oil, gold or diamond], it becomes problematic where a public rent is used for personal gains or where rent seeking discourages national development (Stevens 2003). Rent-seeking entails gaining an economic value from existing natural resources rather than creating new wealth, mostly via manipulating the socio-political environment. More specifically, Stevens (2003, p. 14) defined rent-seeking as competing for 'artificially contrived transfers'. This entails groups or persons capturing government created wealth which can have adverse impacts on the national economy. Due to high returns on natural resources like oil in boom periods, the sector is branded with elite rent-seeking. Economically, it is prudent to maintain a balance between risk and reward, hence rent-seeking that distort such relation can damage an economy (Khwaja and Mian 2011).

The term 'rentier' is to describe persons or states whose incomes are not earned from professional employment or entrepreneurship, instead from

[1] http://edition.cnn.com/2016/11/21/africa/chinese-funded-railways-in-africa/ (accessed on 16/01/2017).

collecting fees from a property they already own (McGuirk 2013; Ghazvinian 2007). A country that derives most of its revenue from natural resources is denoted as a 'rentier state', a concept that originated from Mahdavy's (1970) work on Iran's excessive dependent on transnational oil companies for revenue via oil extraction. Yates (1996) has been a leading scholar on rent-seeking and 'rentier' states in Africa. Broadly, Yates (1996) defines "rentier" states as those countries whose main source of revenue is external to the domestic economic system. Yates (1996) noted that a country can be deemed as rentier if they exhibit four characteristics: rent predominate in the economy; origin of the rent is external to the local economy; a few are engaged in rent generation, with majority involved in its distribution and consumption; and finally, government becomes principal recipient of the external rent. Historically, a 'rentier class' receives rent, which has negative connotation associated with 'lazy' landowners during the industrial revolution who subsist on inherited wealth, with little inclination towards producing new ones (Ghazvinian 2007; Mahdavy 1970). Ghazvinian (2007) posited that reliance on rent can make economies 'allocation states' where states are concerned with distribution of handouts and supervising projects instead of 'production states' that focus on generating wealth via industries and taxes.

An upsurge in rent increases the incentive of the political elites to stay in power, as well as to be challenged by opponents with similar desire for rent-seeking (Barma et al. 2012; Kolstad et al. 2009; Caselli and Cunningham 2007; Stevens 2003). Rent-seeking can have negative consequences for an economy and accountability since it can be used to neutralize or co-opt opponents via patronage or make politics very competitive (Kolstad and Wiig 2009).

Countries reliance on rent from transnational oil companies (TOCs) can weaken accountability and social contract between the citizens and the state. Rent can enable the political elite to reduce tax, making the state less accountable to the people since it is taxes that often serve as social contract between the citizens and the state (McGuirk 2013; Moss 2011; Moss and Young 2009). Governance can be weakened by relying on rent from TOCs since the 'unearned income' weakens the social contract between the state and citizens (Moss 2011; Moss and Young 2009). Taxes are supposed to ensure accountability (Brautigam 2008), hence rentier states dependence on TOCs make them less accountable and irresponsive to the citizens (Watts 2010; 2009). Some of the political elites reduce taxes to avoid democratic accountability (McGuirk 2013) and fail to strengthen tax collecting institutions to curb corruption (Devarajan et al. 2010; Vicente 2010). The

seeming alliance between the state and the TOCs can weaken transparency and the social contract between citizens and the state via taxation (Moss 2011; Moss and Young 2009). As Moss (2011, p. 5) rightly posited, when citizens are 'stripped of the power of the purse, citizens are unable to exert leverage on the government for public service provision and responsible management'. Where citizens do not pay taxes for the services receives, they become less assertive in asking questions on how the goods and services, including efficiency and corruption.

Persistent rent seeking behaviour does not only make corruption and associated challenges pervasive, it can impede entrepreneurship as people effortlessly earn income from natural resources windfalls than engaging businesses like industry and innovation that involve more risk (Sachs and Warner 2001). Natural resource rent can crowd-out innovation when returns in the resource sector are higher than entrepreneurial activities. Entrepreneurial development is likewise related to how countries prioritise and invest in education, instead of being exceedingly focused collecting rent. Gylfason et al. (1999) and Gylfason (2000) posited that countries that invest inadequate resources in education due to discovery of natural resources often witness limited innovation and entrepreneurship, poor governance and sluggish growth. Sachs and Warner (2001) observed wage increase in the hydrocarbon sector relative to other industries in Trinidad and Tobago, and people become more attracted to that sector.

In some cases, educational attainment in natural resource rich countries is adversely hampered as people become locked into low-skill natural-resource-based industries, failed to advance their children education (Gylfason 2001). Gylfason (2001) noted that expenditure on education relative to national income, gross secondary-school and girls' enrolment and retention are inversely related to the proportion windfall in a country's wealth. This relation is non-deterministic, it depends on how a country prioritises windfall spending. Botswana has high natural resource wealth to national wealth but its expenditure on education is encouraging globally (Gapa 2013). The country spent about 8% of its GDP on education in 2012.[2] In 2015, 95% of Botswana's students at tertiary institutions, sponsored the state. In Botswana, public spending is divided into physical assets (43%), education and training (42%) and health (15%) (Khama 2016). Thus, as Gylfason (2001, p. 851) noted, it is not the existence of natural wealth that is problematic, instead, it is the failure of the elites to address the challenges

[2] http://hdr.undp.org/en/content/expenditure-education-public-gdp (accessed on 18/01/2017)

associated with nature's gift. Sachs and Warner (1999) noted that sectoral distribution of windfalls will determines whether it can stimulate the right sectors for national development.

## Impact of natural resource dependence on industry and agriculture

The adverse effect of natural resource abundance on a country's industry and agriculture is an issue that has been rife in the curse literature. Natural resource windfalls can be harmful to an economy when it leads to crowding of capital and labour from the agriculture and manufacturing sectors. The Dutch Disease can adversely impact local manufacturing and agriculture (Auty 2001, 1998; Sachs and Warner 2001, 1997). Gelb (1988) noted that Nigeria and Ecuador's manufacturing and agricultural sectors deteriorated during their natural resource booms. Meanwhile, history has shown that investment in a country's industry and agriculture is noteworthy since these sectors are labour intensive and have repercussions for poverty reduction, employment and linkages to other sectors (Karl 2004; Sachs and Warner 1999).

Sachs and Warner (1999) noted that a natural resource boom can stall industrialisation or even lead to de-industrialisation of an economy where the boom draws away resources from the tradeable sectors. They argue that the extent to whether the resource windfalls can be used to 'sow the seeds' of development depends on the returns on tradeable sectors relative to the natural resource sector. Where returns on natural resource sector are high, it will pull capital into it which can adversely affect growth in the tradeable (manufacturing, agriculture and services) sectors through the Dutch Disease (Sachs and Warner 1999). Windfalls can sometimes be consumed on goods/services instead of reinvesting into productive assets.

As far back in the 1950s, Hirschman (1958) stressed the tendency of natural resources to have limited backward and forward linkages to other sectors of an economy. Recent studies have re-emphasised such tendencies, like oil harming growth in the manufacturing sector (Ross 2012; Karl 2004). The hydrocarbon industry, for example, as stated in Ross (2012) often operates in an enclave, where oil companies literally work in geographical spaces – isolated and self-contained from the national economies, with crude oil lifted and transported to the global market directly. Natural resource sector can be operating as an 'autonomous economy' within the national one,

which linkages to the external world through crude sales. Because the hydrocarbon industry is conditioned outwardly to global economy, it has minimal impacts on the local economy, aside the windfalls (Karl 2004). Yet, in some of advanced economies, where most of the TOCs are headquartered, the hydrocarbon assemblage is fairly integrated into the national economy through extraction, transportation, marketing and technologies (Karl 2004; Wright and Czelusta 2004). Even though Morris et al (2012) recent study on Africa showed some scale of natural resources-led industrialisation, the spread and depth of impact is limited. There is also restricted employment of locals due to unavailability high skills persons in localities (Maass 2009; Karl 2004). Even in countries with a relatively good manufacturing sector before oil discovery, the political and business elites can shift focus to the resource extraction sector (Ross 2012), harming manufacturing which has a potential of technology transfer via learn-by-doing (Frankel 2010; Steven 2003). Manufacturing decline can negatively affect other sectors of the economy like agro-processing.

Agriculture, the mainstay of economies in the developing world [Africa] can decline or be neglected owing to natural resource discovery like oil. It can be a consequence of the Dutch Disease which makes food imports cheaper than to produce locally. Oliveira (2007) posited that in Equatorial Guinea, oil boom did not translate into revitalisation of the cocoa, coffee, or food production since the government has been more focused on oil. Limited capital investment in agriculture, especially where Foreign Direct Investments (FDIs) are channelled into resource extraction with higher returns can have disastrous consequences. Gary and Karl (2003) noted that Gabon in the 1970s and 80s epitomised a classic case of Dutch Disease where local production of food was limited, with most staples imported from France.

Stevens (2003) posited that for most of the oil-exporting countries in the developing world, their agricultural outputs contracted after the oil boom in the 1970s, partly because few investments directed at strengthening the tradable sectors like agriculture, and most policies were orientated towards the extraction. Agricultural exports – a labour intensive economic activity, particularly important to the poor can adversely be affected through the Dutch Disease (Gary and Karl 2003). Dwindling agriculture growth can exacerbate dependency and loss of economic competitiveness (Gary and Karl 2003; Krugman 1987). Ghazvinian (2007) and Oliveira (2007) noted that Gabon became food dependent in the wave of oil discovery, and even common fruits like banana were imported. Nigeria's agriculture is poorly developed, and it derives over 95% of foreign exchange from the oil exports

(Chindo et al. 2014).

Oliveira (2007, p. 74) posited that the neglect of a country's agriculture and increased food imports deepens decline of a labour-intensive sector that often serves as livelihood for rural communities. Food imports can be a drain on foreign exchange reserve and insufficient export-led agriculture deprives a country of extra revenue. Efforts by countries like Nigeria to revive agriculture have failed and their only impact is a proliferation of rentier opportunities in a form of fertiliser subsidy importation contracts for political cronies (Oliveira 2010, 2007; Karl 1997). And more troubling, agriculture decline in some of the resource rich economies have proceeded in tandem with the displacement of the rural population from the countryside and into urban areas as people move into the cities in the quest for employment (Oliveira 2007). Hence, agricultural decline and urbanisation can be mutually reinforcing. Yet, due to the limited employment prospects in the oil industry generally, expectations of improved living condition among the populace outside the agricultural will remain a mirage.

Based on natural resources limited linkage to industry and agricultural development, it affects a resource-rich country's governance in terms of what sectors the state becomes more concerned with. Oliveira (2007) noted that because natural resource-based economies turns to be enclaved, they produce two spaces: 'useful and useless'. The 'useful spaces', for resource rich countries are the natural resource sectors or regions that the state places premium on because of the revenue, and the 'useless spaces', signifying the non-natural resource sectors or non-oil regions. Focusing on the natural resource-rich sectors or regions adversely impact the strengthening of governance institutions in the resource-rich countries.

## Resource abundance, weak institutions and poor governance

How natural resource windfalls negatively mediate and are implicated in institutional weakness and governance in resources rich economies has been the focus of the curse thesis (NORAD 2013; UNDP 2011; Mehlum et al. 2006). Bruckner (2010) posited that a dimension of the curse is deemed to manifest where a resource rich country exhibits corruption and weak institutions. But for economies to gain the benefits from the extractive industry requires stability, strong institutions and political elites that appreciate the import of good governance in resource-based development. Due to the value attached to the link between governance and impact of

natural resources, the curse is referred to as 'governance curse' (NORAD 2013; Pegg 2006).

Mehlum et al. (2006) noted that the impact of natural resource on development is partly conditioned on the quality of existing state institutions prior to the resource discovery. Where institutions are grabber friendly (prone to corruption or rent-seeking), windfalls can reduce the aggregate national income, but where they are less disposed to corruption (producer friendly) it raises the income (Ross 2013; Mehlum et al. 2006). Basically, where the ex-ante institutions are weak, windfalls are easily dissipated through excessive public sector wages and patronage systems to consolidate power (Ross 2013; Robinson et al. 2006).

Some of the weaknesses in the governance structures of the resource rich economies in the developing world can partly be attributed to the social systems in those countries which thrive on patronage. Patronage can be defined as the privilege or material support bestowed on people due to informal or association relations with person(s) in authority (Kelsall 2013; Khan 2010). Governments in those countries spend on projects or programs that will earn electoral support without critically examining their economic merits. In some of these countries, instead of improving education and health infrastructure (UNDP 2011), financial or material benefits are used to induce voters (Whitfield 2011). While, this can appear responsive, it does not lead to structural transformation, and 'hand-outs' cannot be sustained.

Institutional weakness negatively impacts the use of windfalls for the general population (Bridge and Le Billion 2013). Boschini et al. (2007) argued that whether natural resources will be a curse or blessing in country is partly dependent on the interactions between the institutions and natural resources. Where a country's institutions mitigate corruption and clientelism, natural resource can be a blessing. Besides national institutions that mediate natural resource impact, resource extraction in Africa is underpinned by 'strategies of extraversion' (Carmody 2009; Bayart 2000) where the economies are oriented outward through exports and dependent on TOCs for rent (Phillips et al. 2015). Extraversion helps to create alliance between the resource rich states and TOCs, with the state becoming dependent on TOCs for its revenues. National institutions can be weakened due to their reliance on TOCs for revenues instead of developing domestic tax structures.

Some studies however challenged the notion that resources abundance alone affects governance (Kurtz 2009; Robinson et al. 2006). Kurtz (2009) challenged the idea that natural resource discovery leads to institutional atrophy. It is partly the pre-existing conditions – the social relations that

underpin the political economy before the natural resource emerge that determines if the institutions will be strengthen or weaken (ibid.). Robinson et al. (2006) noted that the ex-ante institutional arrangements are critical in how resource shapes development. There are complex relations between natural resources and institutional quality.

Further on natural resource and governance dilemma, Mann (1984) identified two mechanisms through which states or political elites govern: infrastructural and despotic power. Infrastructural power is the ability of the state to penetrate the realm of civil society and to implement decisions, often in a democratic polity (Oliveira 2007; Mann 1984). Autocrats yet depend on despotic power, where the elites govern without institutionalized negotiation with civil society but via force and political patronage. Exercise of despotic power is made possible where windfalls enable the political elites to exercise power through coercion of civil societies into silence or co-option to weaken check and balances (Oliveira 2007). Oliveira (2007) argued that in most resources rich countries in Africa, governance is through infrastructural and despotic power where the state executes politico-economic decisions.

Moss (2011) and Moss and Young (2009) argued that abundance of natural resources like oil can affect democratic polity by destroying the social contract between the state and citizens and encourage corruption as the government becomes less dependent citizens' taxes. The government's reliance on natural resource rent instead of taxes can alienate the state from the citizens, creating restricted accountability. Watts (2010) asserted that a dilemma in resource rich countries (oil-states) is the issue of unearned income, windfall distribution and development of social contract between government and the citizens.

Karl (2007, p. 262) argued that resource economies, especially oil states are prone to external intervention (states and private interests) which influences their internal affairs. They are less subjected to internal pressures that can help produce efficient bureaucracies and democratic polities partly because the states depend minimally on citizens for taxes, a source of social contract (Carmody 2007). McGuirk's (2013) micro survey from fifteen Sub-Saharan countries established strong within-country correlations between increased natural resource windfalls, decreased tax enforcement and democratic governance. Ross (2013) likewise argued that windfalls like oil make authoritarian governments durable, increase corruption and reduce spaces for democratic accountability. Jensen and Johnston (2011) noted that resource wealth not only affects revenue, it incentives behaviour. Morrison (2011) and Bearce and Laks-Hutnick (2011) posited that windfalls affect

redistribution pressures and political stability.

The connection between natural resources and governance is multifaceted. Ross (2012) argued that although in the developing world, resource abundance adversely affect governance, as to whether it reinforces dictatorship or weakens democracies is complex. Natural resource wealth can strengthen an incumbent government, be it an autocrat or democrat. Goldberg et al. (2009) noted that natural resource abundance can lead less competitive politics because those with access to windfalls can co-opt opponents or purchase patronage via social service provision. These patronages are fuelled and extended to external networks such as TOCs that provide financial support to governments in return for lucrative contracts, undermining accountability which can mitigate the curse (Kolstad et al. 2009). How resources are extracted and their impact on development is result of interactions within the state, institutions, citizens, external structures and actors and the natural resources. This paper argues that the impact of windfalls on growth, agriculture, industry and governance extend beyond the state, it is an assemblage – network of natural resources, states, institutions, politics and actors.

## Critique of the curse thesis and reframing it via globalised assemblage

The resource curse thesis, despite its seeming visibility in some natural resource rich economies in the developing world, including Africa, can be criticised in terms of its framing, actors and structures that shape and condition the impact of natural resources. These critiques can loosely be grouped under methodological, institutionalist, Marxist, Georgist economists and Staples thesis in problematising the state of research on the resource curse (Obeng-Odoom 2015; Olanya 2012; Di John 2011; Ploeg 2011; Boschini et al. 2007).

Methodologically, the existing analysis of the curse seemed to have be overly state-centred and selective cases (Stevens 2015; Ploeg 2011; Ploeg and Poelhekke 2010). It has not sufficiently account for geography (spatial manifestation across space). The calculation of the relationship between natural resource endowment and economic growth has been criticized as well. Ploeg (2011) and Ploeg and Poelhekke (2010) posited that the regressions which formed the initial basis of most of the empirical debate are based on endogenous econometric variables. Ploeg (2011) further noted that

the negative correlation between growth and resource wealth can be a result of picking up cross-country variations in per capita income. Wright and Czelusta (2002) likewise argued that some of the cross-country regressions are subjective, and suffered from 'selection biases. For Mideksa (2013), though evidences from cross-country regressions are useful, contradicting incidences of positive impacts of natural resources in some countries suggests there could be other factors (internal and external) or variables that are mediating development outcomes. Stevens (2015) also raised questions about the methods used in explaining the curse (see Di John 2011; Brunnschweiler 2008; Lederman and Maloney 2008). Mideksa (2013, p. 279) argued that insufficient data on the economies on pre-natural resource exploitation makes it difficult to determine if their performance with the windfalls could have been driven by pre-existing variables and not necessarily from windfalls alone. Estimating the impact of natural resource is complicated due to difficulty in assessing how an economy might have performed in the absence of the natural resource (Mideksa 2013). It is difficult to isolate impact of natural resources sector from other factors in resource rich countries.

Institutionally, Boschini et al. (2007) argued that resource wealth alone does not determine whether a country will suffer a curse, instead its incidence or otherwise hinges on the quality of state institutions. Proponents of the institutional critique argued that given the right institutional framework, natural resources can boost a country's economic and human development. Brunnschweiler (2008) noted that institutional deficiency and poor governance inhibit natural resource economies in utilising windfalls for meaningful development.

Marxists on the other hand argued that governments in natural resource poor economies are dominated by local elites (comprador bourgeoisie) whose interests sometimes allied not with the state but TOCs, leading to exploitation and misuse of windfalls to the disadvantage of the populace (Di John 2011). The local elites and TOCs operates the natural resource sector as an enclaved. Ross (2012) and Karl (2004) argued that the hydrocarbon industry operates in an enclave, literally isolated geographical space, self-contained from the national economies but linked to the global market directly via crude oil sales. Encouraging natural resource rich economies to specialise specific resource export instead of diversification negatively impacts national economic development.

Georgist economics also critique the curse thesis. The Georgist school of thought takes its origin from the work of the 19th century economist and political leader Henry George (Batt 2000). In Georgist economics, land,

labour and capital are vital factors of production. Each of these factors of production has economic price: wage for labour, capital receives interest, and rent on land. What is critical to Georgist economics with regards to the curse is the specialty of land as a factor of production (Obeng-Odoom 2015; Batt 2000). Land includes all natural resources that are extracted and sold a market price. When the prices of factors of production are unpaid at the right price, it distorts economic equilibrium and this manifests in other realms of the society (Batt 2000). Obeng-Odoom (2015) noted that in economics, rent is the surplus value after costs and returns, i.e. the difference between the price of natural resource and the extraction and production costs. Central to Georgist economics concerning the curse is natural resources economies have not been able to tax their resources correctly for the general benefits or the resources are monopolised by a few (political elites and TOCs). Additionally, the rent/tax interaction framework depends on availability of information, market conditions, technology and property rights that govern access to and management of these resources (Obeng-Odoom 2015) which some of the countries lack. A comprehensive understanding of how rent is generated, distributed and re-distributed for social uses is critical for resource rich countries (Obeng-Odoom 2015; Batt 2000). If the rent are not collected at market value or left in the hands of a few, it distorts the economy to the disadvantage of the general populace (Batt 2000).

Related to rent and how it affects natural resource rich economies is the 'staple thesis' which explains how resource endowment shapes production relations, tax and reinvestment (Olanya 2012; Innis 1930). The 'staple thesis' explains how backward areas (peripheries) can develop through initial stimuli brought by primary product exports via capital, labour and diversification of production (Olanya 2012; Watkins 1963; Innis 1930). Innis (1930) depicted an exploitative relationship between core (heartland) and periphery (hinterland), where the latter is dominated by the former because the periphery depends on search and accumulation of staples to preserve its economy. The core regions often gain economic and political power through exploiting the natural resource rich economies (peripheries). Per the Staple thesis, the strength of the natural resource rich economy depends on its capacity/willingness to tax and participate meaningfully in staple's sector. Thus, besides taxing the staple, there should be consented effort to reinvest those windfalls into productive sectors of the national economy via system linkages. Resource rich economies that only focus on staple taxation instead of reinvesting and diversifying towards manufacturing will relinquish resource-led development (Olanya 2012). Inability of most of the resource

rich countries to reinvest their windfalls (staples) into other sectors of the economy is partially responsible for the curse.

Based on a critical reading and review of the curse literature and the associated critiques above, it appears there is a need for a reframing or better elucidation why the curse manifest in some resource rich countries. The necessity to revisit curse thesis is further informed by a recent study on the impact of oil on Ghana (Siakwah 2017, 2016). It showed that the impact of oil on Ghana is socially produced, shaped and conditioned by a country's political economy, interlacing with existing globalised structures and actors in a form of a 'globalised assemblage' (Siakwah 2017, 2016). The globalised assemblage can be defined as interactions between and among states, oil importing states, oil companies (local and transnational), energy discourses, national institutions, local politics and transnational actors. Globalised assemblages, Smith (2010, p. 10) argued are 'tangible configurations through which global forms of techno-science, economic rationalism and expert systems gain significance and shape'. Assemblage concept provides a lens via which to analyse changing forms of organization and collective existence, amid political and technological change. With regards to the hydrocarbon industry, Bridge and Le Billion (2013) viewed the assemblages as comprising states (oil producing and consuming) and transnational firms. The boundaries of the globalised assemblage can be extended and challenged to include local politics, human rights and environmental discourses. Thus, it is not only the nature of the state in question, its politics and institutions that determine whether resource windfall will be a curse or a blessing, but how the national political economy interacts with other states, TOCs, and globalised structures and actors.

This paper argues that the resource curse is conditioned by a globalised assemblage. Assemblage is partially informed by Sheppard (2011), Bridge (2008), and Coe et al. (2008) relational thinking and Smith (2010) hydrocarbon assemblage. The assemblage metaphor (Latour 2005) illustrates how the curse thesis transcends default national-scale into interactions networks. The curse is a complex phenomenon that is a product and function of interactions between global and national economies and it has geographical uneven manifestations.

The assemblage is also informed by the concept that governance structure of the hydrocarbon industry that produces and conditions the curse transcends the state into localised transnational politics and actors. Carmody (2009) posited that the global economy operates in matrix governance where established and coordinated networks of actors help to regularize chaotic

flows and relations of globalisation and neoliberal accumulation in the developing world to ensure access to natural resources. This results in uneven development outcomes and manifestation of poverty and resource infused-conflict [the curse]. The challenge is, most prevailing analysis of the curse are state focused, and not sufficiently accounted for external factors that mediate development in resource rich economies (Carmody 2009; Rosser 2006).

Whereas natural resource rich economies are supposed to control their resources, due to the capital and technologically intensive nature of the extractive industry, the countries often depend on TOCs in exploiting their resources and this influences the way windfalls are appropriated (Bridge and Le Billion 2013; Carmody 2009). Rich countries in the developing world also export products to a global market where commodity prices are determined by external factors. Their economies are consequently subjected to external prices volatilities and conditions which impact their development. Harnessing windfalls for development is therefore, dependent on actors and political economy that structures how windfalls are utilised. These actors and structures transcends the national, hence the manifestation of the curse is the result and a product of globalised assemblages. How natural resource windfalls are used to leverage development transcends state capabilities. It depends on technology [often in possession of TOCs], interacting with national institutions and actors and local politics. The extractive industry requires huge capital investments and risks and these inform how windfalls from the sector are appropriated among stakeholders (states, citizens and companies) and their impacts.

The consequences of natural resources are complex and contentious, and they can be intended, unintended, positive or negative. Hence, oil, politics and development is viewed as a 'complex' (Watts 2010). But whereas the 'oil-producing states pre-exist oil, windfalls are inserted into existing regimes of accumulation, governance and state – and out of this mix emerge the oil-complex (Watts 2010). And 'the oil complex is a sort of corporate enclave economy but also a centre of political and economic calculation that can only be understood through the operation of a set of local, national, and transnational forces … dubbed 'imperial oil" (Watts 2006, p. 13). In widening the complexity of the processes underlying the curse, geographers and development experts have widened the extractive industry and it impacts (Haarstad and Wanvik 2016). Watts (2004, p. 76) noted the need to be attentive to how oil is 'inserted into an already existing political landscape of forces, identities and forms of power'. This global regime of accumulation envelops oil extraction (Watts 2013). Haarstad and Wanvik (2016) noted how

energy systems as intricately interwoven with society and relatively not resistant to change. The permanence and stability of the energy–society relationship should not be hyped. Hence, using assemblage theory, they frame the social and material landscapes of oil – carbonscapes – as emergent and relations of exteriority. There are instabilities within the global oil production network: extractive zones, energy distribution infrastructures, and urban spaces of consumption and practice. Whereas there are some structures of inertia and durability, the carbon–society linkage is underpinned by rupture, unpredictability and instability (Haarstad and Wanvik 2016, p. 2). Such carbonscapes are shaped at the intersection of infrastructure, technologies, built environment and social, cultural and political systems (Watts 2013).

Basically, this review paper is premised on globalised assemblage thought, where the challenges that natural resources pose to development is viewed as complex that transcends national boundaries, mediated by the negative impacts of the natural resources themselves, global, national and local politics, and it is differentiated. Cross-sectional studies by Richard Auty and others failed to sufficiently account for the differentiated appearance of the curse. Country-specific analysis has also not resolved the spatial challenges. Both suffer from methodological nationalism. The curse needs to be explained within a globalised assemblage that form the hydrocarbon industry. Finally, based on the assemblage view, the curse cannot be explained by only institutions, politics, unfavourable global trading relations, rent-seeking, or national and local politics. It needs to be explained within nested hierarchies of interwoven spaces and network of interactions between and among natural resources, people, institutions, states, globalised economic structure and actors, companies, technologies, rent and politics.

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