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An Appraisal of Natural Resources and Socio-economic Development: The Nigerian Case

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Abstract

Nigeria has abundant natural resources to compare with other nations of the world. How do such natural resources compare with those of other countries at different stages of development? Do the existences of these natural resources guarantee socio-economic development? What exactly is the problem of Nigeria? Most importantly, to what extent is Nigeria's development a function of its natural resources? Relying on international data sources and empirical research, a sample of twenty countries exhibiting a variety of patterns of natural resources and development were selected at random. Development and natural resources as composite variables were illustrated and measured with COPO-DEV Model as measureable in a non-conventional but more meaningful manner. The outcome indicates that there is no conventional thread relationship between natural resources and socio-economic developments because the phenomenon works differently, depending on whether consideration is on developing, newly industrialized, or developed countries. Moreover, the study also revealed that there is a link between Nigeria's international trade and world poverty; whose prospects well beyond the turn of the century appear gloomy. The better supported, emerging industrializing countries of East Asia and Latin America, where the "prime of development" is rising, paints a divergent picture and revealed growth at an extraordinary momentum. Additionally, a tale of contrasting fortune between the comparisons of two selected countries indicated how long term annual economic growth showed a negative domestic investment translated into marked decline in economic growth.

Keywords: Natural resources; Socio-economic development; Developing countries; COPO-DEV Model, Nigeria

1. Background

Nigeria has abundant natural resources and significant potential than any other country in Africa to grow into the most viable and attractive regional economic hub. However, after several decades of efforts of its leadership in development, many of the basic challenges remain. Assuming there is lack of leadership and inefficient use of natural resources, the populace will linger in poverty and susceptible to exploitation without a long lasting solution. Certainly, the market access prospects will

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never be realized while the cost of engaging in trade and businesses within and across countries will be exorbitant. If these persist, not only will investment decisions be impossible, but socio-economic development will be greatly hampered.

There is no gainsaying that plausible output and production gap valuation are repeatedly used to regulate and standardize policies such as, estimating the suitable background for monetary circumstances, or in appraising fundamental fiscal balances, and the growth inclination from the government budget. In contrast, there seems to be an indication that the abundance of natural resources in itself is an exclusive problem, a rationale for failure, and consequently a resource curse. This is because most incumbent governments are tempted to ignore the discipline of utilizing a country's natural resources.

Indubitably, this subject is remarkably important for developing nations, especially Nigeria because not only did its economy sprout rapidly over the oil boom after independence and became promising as an emerging economy (World Bank, 2012), but then, these natural resources failed to deliver the desired results. A string of events have mired Nigerian growth and has subsequently regressed to an approximately average growth pace. The question is whether this surge and the successive fluctuating economy are an indication of a speedy and utilized natural resources growth and thus a function of good leadership, or were they ephemeral upsurges that may have forced the economy up in support of its natural resources copiousness? On the contrary, how do the basis on natural resources in this region compare with those of other countries at different stages of development? Better yet, is the existence of these natural resources a guarantee for socio-economic development? The response to these questions from a longer term country comparison standpoint would help to indicate whether Nigeria's leadership and natural resources stimulate socio-economic development and at what cost. Besides, there has been limited pragmatic work carried out to evaluate the relationship of Nigeria's potential and socio-economic development.

Correspondingly, this paper presents development and natural resources as composite variables. This approach has the benefit of integrating pertinent and germane information about developing countries notably Nigeria from observable data, and provides countenance for a robust interpretation of the resulting evaluations. It is expected that this evaluation will furnish academics and policy makers with some insight into the notion of the correlation between natural resources and socio-economic development.

The paper is organized as follows: section two will review relevant literature on the concept of the study including global patterns of development, Nigeria, development strategies, and how a country's development could be measured. The design of the study will be narrated in section three while the analysis and discussion will be the section four. The conclusion and implications of the study will be the last section.

2. Literature Review

2.1 Concept of Natural Resources and Socio-Economic Development

The concept of natural resources is presented as the assets for development which a country has at its disposal. Erasmus (2013) believes that the extent of a country's development can be assessed from the divergence between its natural resources and its actual status quo. This connotes that natural resources engenders information about what could be attainable if the country utilizes its resources. In

the past/recent times, capacities have mostly been articulated qualitatively in terms of natural resources that depict auspicious conditions for development (Lundgren, Thomas, & Yack, 2013). In this broader sense, the natural resources of a country comprises of resources that can be employed into the productive processes even though Pfetsch (1990) noted specific constraints and incorporated the organization of these resources or the prospects of altering the resources to productive intents. However, from an embryonic perspective, only selected resources were consolidated and developed for productive purposes, while others were contingent on the kind of goods that were in demand for socio-economic development at a specific period. Therefore, a country's natural resources may very well be its beginning, and development, the desired end, which from the onset it sets out to achieve. Development is concerned with growth to maturity (Collier & Goderi, 2014), the process of perfecting and fully realizing the potential of natural resources (Erasmus, 2013). Natural resources relate to the capacity to grow or develop. In this context, it may be helpful to think about natural resources as a "plane in the hangar" and development as a "plane in the sky". The story of development efforts in developing countries and Less Developed Countries (LDCs), actually sounds like that of a plane that occasionally gets out of the hangar, taxis the runway, and gets right back to the hangar. For Developed Countries, (DCs), their fate is that of a plane in flight, with bearings given. All that seem to change are speed and altitude depending on how the wind blows. For Newly Industrialized Countries, (NICs), the plane is in steep take-off, some approaching full cruising speed and altitude. For countries in flight or take-off, technology, capital, and management capacity have proved to be the jet fuel (Eromosele, 1994).

Socio-economic development cannot however be detached from history, geography, and international power-play, yet the very essence of development goes much beyond these factors. World Bank (1989, 1992, 2002, 2013) noted that development is about improving the well-being of the people for whom the priority of development is to eradicate poverty. Economic growth is an indispensable means for enabling development, but in itself, it is a highly imperfect proxy for progress. Undoubtedly, in the face of worsening poverty in most developing countries worldwide, the subject of potentials and realities of development becomes quite relevant and significant. This, of course, is despite the fact that increasing inequality between countries is in itself a matter of indifference, particularly among western nations. Therefore, devising a successful development policy is the long term solution for the vulnerability to disaster of developing countries (Gravelle & Marples, 2014). Developing countries in the present world economic order are the suppliers of raw materials, resources, treasures, and reserves to the factories of the world's industrial countries. One may wonder if it may still be the case that competitive advantage of natural resources suggests a quite different pattern of output in developing countries from the present. So natural resources are definitely part of the complex developing equation. Nations like Nigeria and India pride themselves with great and abundant natural resources such as vast expanse of land, agriculture, sizeable proven reserves of oil and gas, and abundant human resources, yet development seemed to elude them. Their "planes remain in the hangar". Is there really a strong relationship between natural resources and socio-economic development? These issues shall carefully and objectively be examined in the rest of the paper.

2.2 Global Patterns in Socio-economic Development

In order to identify the global patterns in socio-economic development, it is vital to understand the components necessary to gauge these patterns. While patterns of development in the past were usually assessed using a simple measure specifically Gross Domestic Product (GDP) per capita (Costanza, Hart, Posner, & Talberth, 2009; Gertner, 2010), this has however been extended to include other

components such as the Human Development Index (HDI) (Porter & Purser, 2008; United Nations Development Programme [UNDP], 2009). Traditionally, it is necessary to be acquainted with whether specific regions were experiencing long-standing growth or major glitches of achieving long-standing growth or a pattern of mismatch between upturn and downturn. According to O'Hare (2007), long standing growth is the notion that economies experience developmental transformations through time, especially with varying degrees of robust growth. These patterns of long-standing upturn and downturn are not finite but they do, notwithstanding, appear to be moderately resilient over time. Notably, in between these upturns and downturns are intermissions of mismatched outcomes, wherein lies plausible transition between upturns and downturns. This is especially true since growth is not adequate for upturn and definitely too high for downturn. In this sense, long-standing growth becomes evident only when the pattern of such growth is consistent to at least 15 years. Consequently, a decade of such growth may be categorized as a temporary wave.

Generally, the global patterns of development were gauged from changes in per capita income growth for the various regions of the world (Maddison, 2007; Costanza, et al., 2009) and were acclaimed to exist with uneven development and global inequality (United Nations, 2006). The post war period and the neoliberal era revealed a vivid picture of long-standing upturn throughout the world economy, together with high upturns in the Middle East, Eastern Europe. and East Asia, except Sub Saharan Africa, South Asia, and some Latin American countries with its emergent mismatched outcomes (O'Hare, 2007). Within the neoliberal era, it is important to note that there was a major upturn in many Asian countries such as China, Japan, South Korea, Malaysia and Singapore. One may wonder about the reason for this massive lopsided development. Hossain, Kathuria, and Islam (2010) have cited the role of structural factors relating to the generation of high-technology manufacturers and particularly the ability to export such goods. Yet this is not the singular reason for uneven development. When one takes a comprehensive view of development than per capita GDP growth, several interesting differences emerged in these patterns of inequality (United Nations, 2010).

The global pattern of development has had little or no changes since the Brandt report first published a world map which separated the world into a "Rich North" and a "Poor South" (Stewart, 2008; Solarza, 2012). The line which was illustrated on the map, -Brandt line, divided the global economies passing between Central and North America, north of Africa and India, but then moved towards the south to include New Zealand and Australia atop the line. However, the countries in the poor south have improved relative to each other. In other words, most countries in South America and South Asia have improved relative to most countries in Sub Saharan Africa. Although, Dowling and Rana (2010) argued that most countries in South America and South Asia have benefitted from increased trade and globalization, many countries in Africa have remained latent even with abundance of natural resources, while others have retrogressed.

Despite the introduction of the Millennium Development Goals (MDGs), most of the issues remained the same. The MDGs have been strongly criticized for observed lack of analytical power and justification behind the chosen objectives (Deneulin & Shahani, 2009), lack of strong indicators for within-country equality, irrespective of substantial disparities in many developing nations, lack of legitimacy (International Planning Committee [IPC], 2013), under-emphasized human rights (Fukuda-Parr & Greenstein, 2010), insufficient environmental sustainability (Kabeer, 2010), emphasis on aids rather than development (Easterly, 2009), selection of human capital development (Attaran, 2005; Waage, et al., 2010; Subramanian, Naimoli, Matsubayashi, & Peters, 2011) and disproportion in the role of equity in the MDGs (Vandemoortele, 2010).

Until recent times, even though their terms of trade have tended to move in opposite directions, per capita growth rate between developing and developed countries have tended to move in opposite direction (Bleaney & Greenaway, 2001). Apart from NICs, the poor countries, notably those in Sub-Saharan African and Latin American regions, have become poorer and the rich countries have become considerably richer (Rigney, 2010; Lundberg, 2012). This trend according to World Bank (1991), Ravallion and Chen (1997), and Collier and Goderi (2014) has been attributed to the sharp downward trend in commodity prices during the “last three and a half decades” of the 1980’s negative aggregate resources transfer, and a result of rising real interest rates on unsustainable external borrowing, and poor policy response by their governments to the changes in the external circumstances. Hassan (2002), Agbaje (2013), Acemoglu and Robinson (2014) also noted that the reduction in concessional and other financial inflows present severe slackening in developing countries’ growth. Worsening terms of trade has resulted in a situation whereby the total exports by developing countries –other than oil- are smaller in value than pricing product exports of industrial countries (Agbaje, 2013).

Largely, contemporary problems of developing countries include the financing of development through the private banking system and the related problems of debt, the oil price, inflation and the choice of productive investments. There is no doubt that insistent foreign aid is a major theme of the recent literature of western guilt, which holds the West responsible for the poverty of most Asian, African and Latin American countries (Zafar, 2007; Mesquita & Smith, 2007; Easterly, 2009; Lawson, 2012; Adam, 2013). While Moyo (2009) contended that foreign aid leads governments of LDCs to spend more time ingratiating and serving their donors rather than on their citizens, Ayodele, Cudjoe, Nolutshungu, and Sunwabe (2005) asserted that the more aid poured into Africa, the lower its standard of living. They argued that per capita GDP of Africans living south of the Sahara declined at an average annual rate of 0.59% between 1975 and 2000. Money from rich countries has trapped many African nations in a cycle of corruption, slower economic growth and poverty (Agbaje, 2013). Essentially, without “foreign aid” there is no “Third World”. This means that historical and geographical factors have put Africa at a special disadvantage.

Furthermore, the division of labour which was established historically between the rich and the poor countries was a deeply unfair one. The international trade is seen as a mechanism which exploits developing countries and helps perpetuate under development (Green & Sutcliffe, 1988). In other words, it is an instrument of immiserisation (Narlikar, 2004; Blastland, 2004; Eboime & Umoru, 2012; Wei & Zhang, 2013). Donaldson (1984) and Chang (2002) argued that there is no reason to believe that countries currently specializing in primary production may not have had comparative advantage had they been allowed to develop in that direction.

Hoogvelt (1988) and Hoekman and Martin (2012) believe that factor and commodity markets at the centre of the world capitalist system became more monopolistic and oligopolistic than at the periphery. In the long run, this has affected the terms of trade for the periphery unfavourably. Others (Gale & Orszag, 2003; Klasen, 2005; Gravelle & Marples, 2014) believe that poor policy responses by developing countries, often cited by international financial institutions as a key cause of slow economic growth, is actually only a small aspect of the complex problem. Western nations have themselves been accused for failing to adopt adequate policies to protect their interest and genuinely promote the economic development of poorer countries. For example, deficiency payment schemes, protective import prevention, and surplus-buying schemes adopted by American farming communities have been used to close off potential markets for agricultural producers in developing countries.

B. Higgins and Higgins (1988), Andrews (2009), and Jackson (2013) observed that as a proportion of total activity, the role of American direct investment in developing countries has declined substantially. Unfortunately, there is decidedly clear preference for investment in other developed market economies. Actually in comparison with the flood of capital to countries such as New Zealand and Australia, in the nineteenth century, the flow of capital to the developing countries today, is just a trickle. Moyo (2009) questioned why the world continues with its aid-based approach in LDCs when it is obvious that trade, investment (domestic and foreign) in addition to transparent and effective capital markets are indispensable for economic success. In other words, there seem to be a conspiracy in which there is one set of policies designed for LDCs, and another for the rest of the world. Otherwise, Hoogvelt (1988) will be right when he alleged that the success of the development performance of rapidly developing countries was associated with their success in participation in world trade, either as producers of vital resources or as industrializing markets.

The components mentioned above have revealed that socio-economic development antecedent has not only been grossly unequal historically, but possesses elements of massive lopsided development. There seem to be little or no changes despite the various economic mechanisms and interplay introduced to surge the development. It has been mired by poor leadership in LDCs.

2.3. Factors Influencing Development Pattern

Cheung (1998), Chiripas (2012), and United Nations Office on Drugs and Crime (UNODC) (2014) observed that development and underdevelopment is a two-way street: the industrial nations have become developed by expropriating economic surplus from those countries with which they traded. The result was that the latter became underdeveloped by aiding the ascendancy of the west. Intense economic interaction with industrializing countries with a narrowly specialized, export-oriented primary production is inclusive as one of the outcomes of developing nations' activities (Coffin, Stacey, Cole, & Symes, 2011).

The imposed specialization of production was that it combined with a sustained coincidence of interest between ex-colonial power and post independent elites to block any attempt at industrialization and internal social transformation (Agbaje, 2013). This factor has been responsible for the overall economic stagnation and extreme pauperization of the masses in developing countries. Moyo (2009) went further and accused local elites in developing countries for consciously or unconsciously collaborating with foreign interests in articulating government policies that facilitate dependency on developed nations and under-development.

The role of oil and the international debt crises is another factor that has influenced development patterns (Karl, 2007). By coincidence, more than half of the world oil producers and exporters are developing countries. But banks from the West however, have always occupied the strategic position, as custodians of the world's oil money. Today, developing countries between them owe more than 4 Trillion dollars (Mead, 2012), most of which cannot be repaid. Money that otherwise should be spent on development for the poor is spent servicing debt owed to axe-wielding creditors in rich countries.

Donaldson (1984) aptly identified the source of the problem when he said the chasm which separates the rich countries is merely a magnification of the process at work within developing countries' economy. The mechanisms which create such economic injustices are the same. He contended that developing countries shall only be able to contribute towards solving the problem of

international inequality if they put their own house in order. Nonetheless, they neglect both to their peril.

As instruments of development, foreign investment, multinational and transnational corporations, have been praised and blamed for the present pattern of development (Borensztein, De Gregorio, & Lee, 1998; Forte & Moura, 2013). Caught between the need to attract foreign investments, modern technology, managerial expertise, job creation, increased earnings from export and taxes and the need to indigenize, most Sub-Saharan countries including Nigeria lost out and became the net losers. More so, continuing western indifference and “lip service” to the plight and needs of developing countries have not helped matters (Enahoro, 2013).

Thus, from the slave trade, through the colonial era to present day, developing countries have paid the full price. Western “sacrifice” today actually is a repayment of a debt they owe to countries that have overtly or subtly been exploited (Stewart, 2013).

2.4 The Case of Nigeria in Developing Strategies

Nigeria with a population of 177.2 million is Africa’s most populous country (United Nations, 2013; Central Intelligence Agency [CIA], 2014) even though it has a land mass of 923,768 sq. km and oil-rich, accounting for over 38 Billion barrels of oil proved reserved (2% of world oil proved reserved and 3% of world production) with abundant untapped resources of natural gas (Erasmus, 2013) –Nigeria has not been isolated from the problems of Sub-Saharan Africa. With a mono product economy, it has actually been more divested by the external shocks in world markets. Nigeria has had to contend with highly volatile oil prices, which in twenty years halved –sharply falling commodity prices (“Q&A: Volatile Oil”, 2009; Aliyu, 2009; Eboh, 2013). Like most developing countries, it got stuck in the debt crises, as western banks desperately recycled oil money and Nigeria’s long term external debt grew from \$450 million in 1970 to \$30.4 billion in 2003 (World Bank, 2005). However, an agreement was reached with Paris Club in 2005 to cancel out the debt after paying \$12 billion (“Nigeria to Get”, 2005; Bakare, 2010). The effect of the debt relief is yet to be seen as the country has plunged back into a new set of debt –a confirmation of resource curse.

The International Monetary Fund (IMF), World Bank and other western creditors, notably Paris and London Clubs, urged Nigeria’s policy-makers to carry out economic reforms (Cooper, et al., 1993; Handley, Higgins, Sharma, Bird, & Cammack, 2009). This was initiated in September 1968, with remarkable zeal and courage despite the attendant pain inflicted on millions of households across the nation, hoping conditions will improve (B. Higgins & Higgins, 1988). The World Bank (1991) was to report later that some countries failed to prudently manage an improvement in their terms of trade. Nigerian government (amongst others) translated financial surpluses that accrued from positive changes in terms of trade into heavy public spending and leverage future income streams with large-scale borrowing (Bakare, 2010).

The largely subsistence agriculture has failed to keep up with the rapid population growth. Once a large net exporter of food (Adesina, 2013), Nigeria now must import food (Ofuje, 2014). Following the signing of an IMF, stand-by agreement in August 2000, Nigeria received a debt- restructuring deal from the Paris Club and a \$1 billion credit facility from the IMF, both contingent on economic reforms (Rieffel, 2005; “Nigeria to Get”, 2005, “Nigeria Settles”, 2006; CIA, 2011). Nigeria pulled out of its IMF program in April 2002, after failing to meet spending and exchange rate targets, making it ineligible for additional debt forgiveness from the Paris Club (IMF, 2013).

So in hindsight, it has been a tale of investment without development, despite the enormous natural resources abound. The woes of Africa's economy can be attributed to wrong application of resources, incessant wars, prohibitive investment environments and undue government interferences in production process (Erasmus, 2013). Of course, while that is partially true of Nigeria, it is equally true that foreign inflow has been grossly inadequate (Forte & Moura, 2013). However, there is a limit to which retrogressing "developing" countries can blame external environment for all their ills. Where then lies the problem of Nigeria?

Socio-economic Development in Nigeria

Historically, Nigeria's former military rulers failed to diversify the economy away from overdependence on the capital-intensive oil sector, which provides 20% of GDP, 95% of foreign exchange earnings, and about 65% of budgetary revenues (World Bank, 2005). The transitional head of government, Shonekan, sincerely confessed that the lack of fiscal discipline is the bane of the country's economy. Macro-economic management is far from efficient. The two most significant factors have been the continuing devaluation and instability of the local currency, and the bulging fiscal deficit accompanied by excessive money supply (Shonekan, 1993). Unfortunately, these problems persist.

Rather than adopting better leadership principles, what we have witnessed is that successive leaders usually pursue their own blind and selfish agenda and opportunistic tendencies to satisfy their personal conception of leadership (Agbaje, 2013; Lundgren, et al 2013). They create, through sheer arrogance of power, a situation of want, frustration, hunger, rancour, fear and violence amongst the populace to sustain and perpetuate their rule (Erasmus, 2013). They strive to keep power by arousing the base instincts as well as ethnic and religious sentiments of the people. Because most of the leaders are intolerant of divergent views and lack the discipline of a principled way of life; they break rules of civilized behaviour in the belief that the end justifies the means. Credibility loses its place and corruption takes over.

In view of the above, most of the sectors in the economy have been badly affected which proves Donaldson (1984) and Eboreime and Umoru (2012) right, when they noted that achieving development involves changing the socio-economic context itself and basically transforming attitudes and institutions. There is however no sign that such fundamental change to attitude and institutions are in sight. Concomitantly, the nation's social values have been distorted by the blind worship of wealth without regard to the manner of its acquisition (Eromosele, 1994). The solutions to the problems facing Nigeria as a nation are multifarious and the presence of these problems has culminated to affect natural resources and development.

2.5. Measuring a Country's Natural Resources and Development

No doubt, it is extremely difficult to measure in a cardinal way, a country's development and to a lesser extent natural resources. This is because there are several approaches to measure development. One of the ways is to duplicate the development track of other countries considering their present state as an appropriate intent over time. Another way is to extract values from the governments. Unfortunately, most governments have inevitably a rather crude vision and interpretation that often disregard the future at an extremely high rate. Besides, some governments are actually the main impediments to development on any conceivable delineation. When this is the case, where then is the

prerequisite to assess the government? For the Nigerian case, the bonding point between the Government and ordinary Nigerians is situated between growth and development. While the Government, according to Adedimeji (2014) believes that the Nigerian economy is growing, since the economy is widespread than an oil territory now and is cheery, its citizenry think that there is nothing laudable in growth without development. Admittedly, growth engenders development, at least in economic terms, but development is not just about growth (Cypher, 2014). While growth is quantitative, development remains qualitative.

According to Dudley Seers in Yongo-Bure (2007) and in Anger (2010) development has several compositions and economic growth is just one. Seers argued that it would be completely bizarre and outlandish if poverty exacerbates, unemployment proliferates and inequality escalates, to call the result “development”, even if per capita income doubled. Development should therefore be measured based on the necessary condition of realisation of the potential in humans. In this sense, the HDI, a multifactorial statistic will be the most appropriate to rank countries into tiers of human development (UNDP, 2013). This is accompanied by the 2010 Human Development Report (UNDP, 2010) which is a further Inequality-adjusted Human Development Index (IHDI). While the IHDI is the authentic level of human development (accounting for inequality), HDI can be interpreted as an index of "potential" human development (UNDP, 2011). Therefore, adequacy of family income to meet basic needs, full employment of family heads, access to health facilities, increased access to education and improved literacy ratios, growth in GDP, oil proved reserves, opportunity to have a ‘say’ and ability to plan and implement decisions in national interest, are all considered suitable objectives for measuring natural resources and development in poor countries. Hence, Coleman and Nixon (1988) and Salomon and Arnott (2014) were right in their conclusion that the rate of relative level of a country’s development are normative concepts whose definition and measurement depend on the value judgment of the analyst involved. In the developing world, it is widely believed that a country’s development is as good as its natural resources. That is almost like saying an individual’s success in life is as good as the intelligence quotient as a child. Amazingly, for example, Nigeria prides herself as the giant of Africa (Eromosele, 1994); not an industrial giant, not a technological giant, not even a welfare giant, but a giant of natural resources – large population, abundant oil and gas reserves, copious mineral deposits, immense arable land, and so on. This study aims at establishing the relationship between natural resources and socio-economic development. Two basic research questions that were put forward are, “to what extent are a country’s development a function of their natural resources?”, and “does the existence of good natural resources guarantee socio-economic development?”.

3. Methods

3.1 Model

In order to undertake a meaningful study of the complicated relationship between natural resources and socio-economic development, an index was formulated by the author to measure the key variables of research interest. The index styled COPO-DEV (Country Potential/Development) Model, measures natural resources and development on a 5-point scale, based on five readily demonstrated, confirmable and verifiable components each of which has an extremely strong affinity with the variable measured (Airhunmwunde, 2004). The advantages of the model is that it does not only empower and facilitate comparability but it also removes the statistical snag associated with handling raw data. The model is easy to compute and the indicators give a clear and a practical view that makes it replicable at any time. Additionally, it requires no universal pattern for its

implementation yet it can conveniently handle long term measurements with simplicity. Its use is neither expensive nor time-consuming, and even the preliminary results are readily available for replication for a long period of time. Similarly, it is also flexible because the instruments can be modified to suit the purpose of study. It provides a lot of information on contextual factors to help interpret the results or the variation in patterns with similar economic characteristics. More so, where there is reduction of data to numbers, no result nor information is lost and there are no untested variables that could account for any form of impact. It is very free from the issue where correlations may mask or ignore underlying causes or realities. It is simply illustrative, explanatory and adequate for this intent (Airhunmwunde, 2004). However, the model does not fantasize or pretend to be absolutely comprehensive because the evaluation may be subjective and this may distort reality. Also, estimates cannot be obtained of the magnitude and distribution of impacts. And because it is country specific, its application is not feasible for other forms of comparison in research analysis and this limits its uses (Airhunmwunde, 2004).

Notably, efforts have been made to perform a randomized trial on the model (Boruch & Mosteller, 2002; Glennerster, & Takavarasha, 2013) by using countries not listed in the samples of this research. This was performed repeatedly not only in Airhunmwunde (2004) but has consistently been modified over the years with several interchanges between the countries selected. The results were not different. However, because randomization is not completely free from errors and biases (Walker, et al., 2009), the sample size has also been dilated and contracted several times to test whether there will be outliers or alterations in the findings (Osborne & Overbay, 2004; Lavraskas, 2008). All efforts have been made to avoid selection, measurement and intervention biases (Sackett & Wenberg, 1994).

3.2 Analysis

To compositely measure country's natural resources, as revealed in Appendix A, five major components were considered: land area per thousand of population, literacy rates, growth in gross capital formation, proved oil reserves and agricultural value added. In this sense, potentials have been measured based on natural attributes in addition to human effort. On the contrary, development has been compositely measured, as shown in Appendix B, by considering yet another five components: GNI per capita, life expectancy rate, percentage age group in secondary school enrolment, annual growth in Gross National Product (GNP) per capita, and the value of manufactured goods destined for countries which are members of the Organisation for Economic Co-operation and Development (OECD). Undeniably, these are estimated and complete measures but they are absolutely revealing as will be reflected in the analysis. The idea is to incorporate welfare and technological progress indicators as well and not just conventional measures of economic well-being (Airhunmwunde, 2004). Similarly, country's natural resources and development evaluation methodologies are shown in Appendixes C and D respectively. This table indicates how raw data is translated to scores on COPO-DEV Model. Again, the scores are merely indicative rather than absolute. The indexes afford practical ways of measuring out variables of interest, at component level, at country by country level, and at regional level. It enables us to explore the aforementioned two basic research questions as well as other subsidiary questions which include how potent is the relationship between literacy level and economic growth? Is life expectancy –as an indicator of living standard strongly associated with economic prosperity and poverty level? What kind of relationship exists between natural resources endowment –as measured by area per population –and economic growth? How has growth in gross capital formation impacted on long-term 33 year annual growth in GNP per capita?

3.3 Procedure

The study of twenty selected countries at random, exhibiting a variety of patterns of development and natural resources was carried out empirically between the periods of 1980 to 2012. The countries comprise five from Africa: Gabon (Central Africa), Kenya (East Africa), Libya (North Africa), Nigeria (West Africa), and South Africa (Southern Africa); Five from Latin America: Argentina (South), Brazil (East), Bolivia (Central), Peru (West), and Venezuela (North); five from Asia: India (South Asia), Indonesia and Singapore (South Eastern Asia), Iraq (Western Asia), and Korea Republic (East Asia); and then five from OECD countries: Australia (Australasia), Germany and UK (Europe), Japan (Asia) and United States (North America). For the purpose of analysis, the countries have been further classified into three: LDC, NIC, DC, and the relationship between key variables in development potential were shown for analysis. The idea is to establish trends and re-classify countries on the basis of growth and development over a period of time. A further study carried out revealed a comparison of two selected countries –Singapore and Nigeria to reflect long-term growth and domestic investments for four selected years within three decades to tell a real life development narrative of conflicting fortunes between a NIC and a LDC unsuccessfully undergoing harrowing economic reforms. Observable data were collected from various published documents where an expression for a robust interpretation of the resulting evaluations was undertaken.

4. Analysis and Discussion

The following attempts to furnish a summary of the key findings and response to the research question: To what extent is countries' development a function of their natural resources?

As shown in Table 1, development is a function of their natural resources to a limited extent. Unlike the developing countries, development and natural resources moved in opposite direction for industrial countries. For all twenty selected countries studied, it was found that there is a fairly strong but positive relationship, between development and natural resources scores. Supplementary evaluation was needed to establish the strength of the established relationship. For the sub-category of five developing countries, there was a much stronger positive relationship between development score and natural resources score, than in the main group. This strongly suggests that development is more potential-driven in developing countries, still as it were standing on the springboard, than in industrial countries. For the OECD countries and the NICs, the depiction was quite different. Rather than positively correlate with potentials scores –as in the main group –development scores of this subgroup of four countries (Singapore, Australia, United Kingdom, and Japan) correlated negatively. This phenomenon may be explained with the original analogy and consonance. 'A plane in the advance stage of its flight requires little ground assistance from the airport to take-off'. In other words, the greater the development of a country, the lesser the importance of and dependence on its natural resources in the development scheme.

Lucidly, this paradigm of using COPO-DEV Model reveals that developing countries tend to overestimate their development potentials. The reality is that natural resources transcends the soil of natural endowments but include the seed of domestic investment and an educated human resource. Correspondingly, the five African countries had an average natural resources for development score of 16.2 points; the five Latin American countries averaged 19.6 points bolstered by Argentina and Venezuela; the five Asian countries' points propped up by Indonesia and Iraq, and the five OECD countries averaged 17.8 points, out of a possible maximum score of 25 points. Simultaneously, this exemplar and COPO-DEV Model depicts the deficiency of measuring socio-economic progress and

classifying the world on the basis of a single development measure such as GNI per capita, which is only but one element in the equation. In this analysis, the five African countries had an average development score of 11 points; the five Latin American countries had an average point of 17, Asian countries averaged 18 points, sustained by Republic of Korea and the five OECD countries averaged 21.8 points, out of a possible maximum score of 25.

Table 1: Relationship between Natural Resources and Development

Country	GNI per capital (\$)	Adult Literacy (%)	Proved oil reserved in \$ in bbl/Day (Bln)	Life expectancy (Years)	Gross Capital Formation	1980-2013 Long term annual Growth	Natural Resources Score (Appendix C)	Development Score (Appendix D)
Africa								
Gabon	10,040	89	3.7	63	4	1.9	15	10
Kenya	870	87	Nil	61	4	1.9	15	10
Libya	12,930	90	48.5	75	5	1.0	20	14
Nigeria	2,490	59	37.2	52	2	2.3	15	6
South Africa	7,460	94	0.015	56	2	1.1	16	15
Latin America								
America	11,363	98	2.8	76	4	4.9	21	22
Argentina	11,640	91	14.0	74	5	0.5	18	18
Brazil	2,220	94	0.5	67	4	1.9	16	10
Bolivia	5,890	94	1.2	75	5	6.4	18	16
Peru	12,460	96	297.7	74	4	3.5	25	19
Asia								
India	1,550	74	9.0	66	5	3.1	15	14
Indonesia	3,420	81	4.1	71	5	4.9	17	18
Iraq	6,130	79	140.3	69	4	3.1	17	14
Korean Rep	22,670	97	Nil	81	5	8.5	16	23
Singapore	51,090	96	Nil	82	5	0.2	13	21
OECD Countries								
Australia	59,790	96	4.2	82	5	2.9	21	22
Germany	45,170	99	0.3	81	2	2.5	14	21
Japan	47,870	102	0.4	83	3	3.5	15	23
UK	38,500	97	6.9	82	3	3.5	14	21
US	52,350	99	26.5	79	4	1.7	25	22

Source: World Bank Development Indicator (2014); UNESCO (2013); UNICEF (2014); World Fact Book (2014); OPEC (2014); Nation Master (2014)

Notwithstanding the strong positive correlation in the twenty countries under study, there exists a low but positive correlation between development and 33-year long term growth factor except for Republic of Korea which seems to be fairly higher. Furthermore, while a reasonably strong positive relationship exist between 33-year growth factor and literacy level, a strong and positive relationship exists between life expectancy and country's per capita income. Long-run growth responds positively to Gross Capital Formation but less true for developing countries whose growth is almost indifferent to such capital formation. Besides, the economic growth in terms of 33-year long term growth factor is completely indifferent to natural endowment measured by such indicators as area of land per inhabitant.

Vividly, human effort in the form of good leadership, continuous improvement in technology, and history, all have a role to play in enabling a country to achieve much higher levels of development that can ordinarily be possible, based only on its natural resources. There were greater disproportion in development than in natural resources of countries. While the lowest and highest score was separated by 17 points in development, natural resources scores were separated by only 13 points. Consequently, developing countries hoping to develop some day merely on the strength of their natural resources may in reality be day-dreaming; much more is required.

To answer question two on whether the existences of good natural resources in a country guarantee socio-economic development, we refer to Table 1. As can be seen, South Africa and Republic of Korea in the table above had natural resources scores of 1 and 2 points higher than Nigeria but a development score of 11 and 17 points higher respectively. Nigeria is just one point short of Japan's natural resources score, yet the latter had a development score that was a clear 17 points higher. Relatedly, Nigeria's natural resources scores surmounted that of Germany, Singapore and United Kingdom, yet all three had a development score much higher. Amazingly, diminutive oil-rich Gabon had a natural resources score of same point with Nigeria, but achieved a development score 4 points higher. Also, the Latin American countries of Peru and Brazil had natural resources scores of barely 3 points above Nigeria but ranked ninth and tenth on the development score with 10 and 12 points respectively higher than Nigeria. Correspondingly, even though Venezuela had the maximum natural resources scores of the twenty countries selected, it emerged eighth in the development ranking.

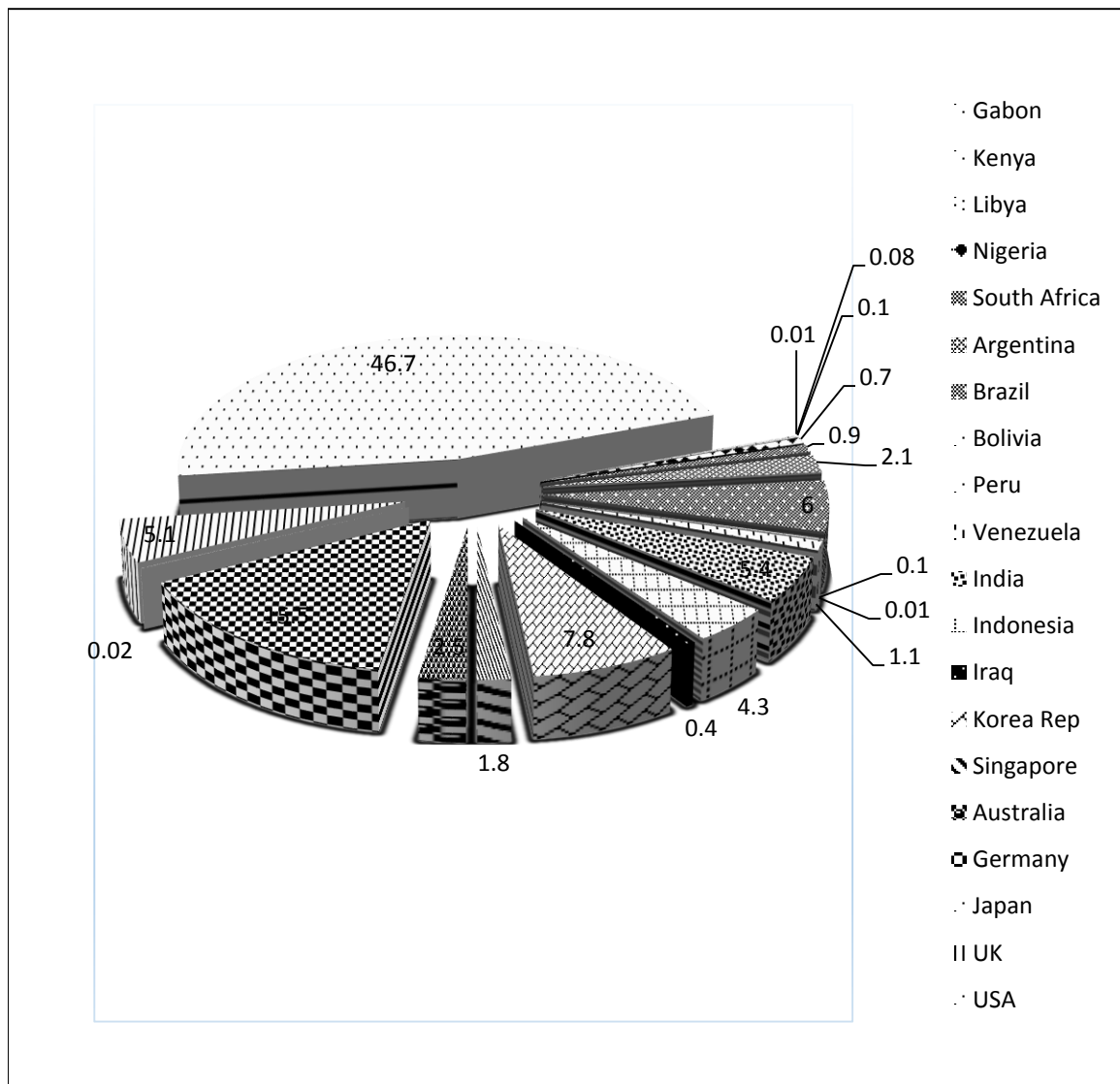
On the factors intruding on these countries' natural resources, it is observed that Africa's relative natural resources is not as great as popularly believed. With 17.8 points against 16.2 points, African countries do not have better potentials than the OECD countries studied. Notice that the heavily indebted African country (Nigeria) had appallingly low natural resources in terms of growth in gross capital formation, compared to Asian, Latin American and OECD countries.

Also, India, Indonesia, and Nigeria had exceptional natural resources in terms of agricultural value added than other counterparts yet their development were wide apart (Appendix A). Asian, Latin American and OECD countries excelled in terms of having a very literate human resource, a potential that is still lacking in most African countries. The realities of socio-economic development show that Japan and Republic of Korea had the highest development scores of the twenty countries and scored about the same natural resources score with most countries in Africa and even much lesser natural resources scores with many countries who failed to turn their natural resources into development. This appears to support the proposition that, to successfully translate high potentials into development, there must be wide cultural acceptance of the desirability to work and high aspirations, as the Japanese and the Koreans supposedly do. Unquestionably, it does appear that poverty indeed has an association. It could not have been a coincidence that apart from oil proved reserves, the African countries in the study, particularly Nigeria scored lowest on key components of the natural resources index, such as annual long term economic growth, education and technological competence, reflected by the value of manufacturing (Appendix A).

Remarkably, Argentina, Brazil, India, Indonesia, and Republic of Korea were the only non-OECD countries in this study whose value of manufactured goods (see Figure 1) competed with and was analogous to those of OECD countries. Inquisitively, great natural resources are no magic wand and this was revealed when the highest development score reached by Japan was two points short of the

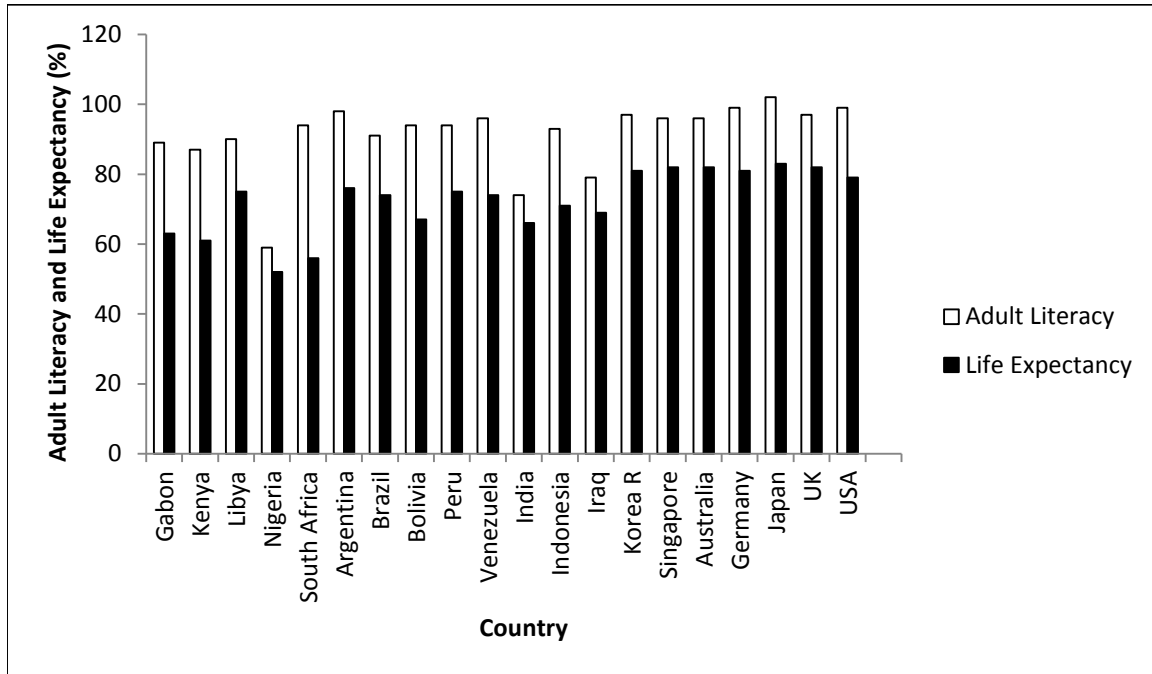
maximum. To the contrary, the highest natural resources score attained by Venezuela and United States was six and three clear points short of the maximum development score respectively, a further corroboration and substantiation of limitations of natural resources as a vehicle of development. At the same time, wealth and longevity are positively related. This possibly explicates why the five African countries had average life expectancy of approximately 60 years. Conspicuously, of the twenty countries studied, the highest long term annual growth for more than three decades ending in 2012 were recorded in Indonesia, Argentina and Peru. The documented rate well-ahead of the OECD countries. Affirmatively, the OECD countries were indomitable in terms of conventional basic development indicators such as GNI per capita, literacy rate and life expectancy (see Figure 2).

Figure 1: Value of Manufacturing (%)



Source: World Bank Development Indicator (2014)

Figure 2: Comparisons of Adult Literacy and Life Expectancy



Source: World Bank Development Indicator (2014)

Notice that development scores in the COPO-DEV Model correlated positively but not strongly with long term annual growth rate, precisely substantiating that economic growth and conventional measures are only part of the development equation.

Definitely, the development in some countries in Latin America and to a larger extent in Asia is fast rising, while the Republic of Korea’s chartbusting growth is remarkable – topping the list of twenty selected countries should be rated a well-deserved point as it reflected an outstanding class. For a country’s development to increase in this manner over three decades is certainly a remarkable exploit. At the same time, Indonesia’s long term annual growth grew more than 10 times compared to the United Kingdom, and 2 times more than Germany. As a development benchmark, it would appear that most countries in East Asia are in economic growth terms, moving at subsonic speed in a supersonic world. Principally, that the Republic of Korea’s annual long term growth is more than 5 times of Nigeria’s or that Indonesia is gliding more than 3 times as fast, is stale news to many. After all they are growing more than the swift Japan. The tiny country of Gabon had development of ten, almost doubling Nigerian’s development even though the long term growth was little below. What more can be illustrated about Nigeria’s wasted and unproductive potentials in addition to its bad leadership?

4.1 A Saga of Contrasting Fortunes: The Cases of Nigeria and Singapore

Founded as a tiny British trading colony in 1819 with a present population of 5.5 million (World Bank, 2014), it amalgamated with the Malaysian Federation in 1963 but separated two years later and became independent. This country is one of the wealthiest countries of the world even though its history is virtually similar to Nigeria’s. It surfaced from domination by numerous local potentates and being a trading post of the British Empire. In 1965, it had a gross domestic product one-fifth that of Nigeria. Today, it is one of the world’s most prosperous countries with strong international trading linkages and with per capita GDP equal to that of the Big 4 nations of Western Europe, even though Nigeria is 1,300 times larger in land mass and 32 times more populous (World Bank, 2012). What

country can it be other than the “Asian Tiger”, Singapore? Intensely, it has since cracked the problem of underdevelopment even though the former (Nigeria) prefer to defer development. Singapore has successively become one of the world's most prosperous countries with robust international trading links (with one of the world's busiest ports in terms of tonnage handled) and with per capita GDP equal to that of the foremost nations of Western Europe (CIA, 2014).

A reflection on Table 2 below reveals that sustained investment is indispensable for development. This is because while Singapore maintained a positive growth in gross capital formation mainly in productive capacity translated into a 14 fold increase in the value of manufacturers for OECD, Nigeria dropped the high, transitory and un-sustained investment tempo it achieved in 1981. Unable to manage in the face of adversity and economic structural reforms, by 1990 and in subsequent year’s high and negative investment growth became the trend until recently. Irrespective of this development where the GNP per capita was doubled in nine years, Singapore only increased with 8 steps on poverty ranking from 7 times Nigeria’s per capital income in 1981. Suffice to stress here that developed Singapore maintained a steady long-term annual growth in the 6 to 8 per cent range while Nigeria as it were, went back to the hangar having attained 3.5 to 0.1 per cent growth range up to 1990 and diving to almost nil in 2003. The difference is clear, are policy-makers and administrative operatives in Nigeria willing to learn?

Table 2: Development Tale of Contrasting Fortunes

Indicators	Nigeria An oil producing nation				Singapore A newly industrialized nation			
	1981	1990	2003	2013	1981	1990	2003	2013
GNP per capita (\$)	807	322	510	2,800	5,655	12,745	23,320	61,400
Growth Capital Formation (% of GDP)	10	-10	-15	13	7.2	13.6	27.4	27
Long term annual growth (%)	3.5	0.1	0.06	6.6	6.4	7.6	8.1	10.2
Value of manufacture for OECD (\$Bln)	\$0.13bln	\$0.27bln	\$2.2bln	\$30.2bln	\$4.9bln	\$19.5bln	\$58.7bln	\$53.7bln
HDI Value	0.391	0.432	0.434	0.471	0.729	0.756	0.852	0.895
World Bank poverty ranking	54	169	173	186	93	85	71	6

Source: World Bank Development Indicator (2014); UNESCO (2013); UNICEF (2014) World Fact Book (2014)

Surmounting the high trade barriers of OECD countries is a seal of success, particularly where the goods exported are manufactured. Backed with cheap labour and appropriate technology, Singapore’s high technological exports grew four-fold in nine years. Over the same period, Nigeria’s atrociously

low value of export to the same region nearly doubled despite the intensified export production and a grossly devalued local currency, an indication that economic reforms do have their limits.

Conceivably, administrative operatives in Singapore such as those in public office, electoral or appointive, are not perceived as the counterpart of winning the lottery; of converting a public servant from indigent to prince; or, in broader terms, making him or her a sudden millionaire. Nonetheless, it is possible that in those fortunate places like Singapore, citizens—even those who are popular advocating probity and the public good—do not lose their minds, and become miserable slaves of money the moment they enlist into government. Considering Singapore's wealth, it could well afford to overindulge its public servants, which, by all measures, it does. Public servants ought to represent the people they serve to the extent that they cannot or are not supposed to enjoy a standard of living far higher than is possible for the average citizen, the true joint-owner of the collective wealth from which public servants are paid (Ifowodo, 2012). This is the bane and despicable moral failings in Nigeria where its citizenry serve officials; where officials lack genuine concern; where politics is a job and a career promotion; where there is a special talent for perpetrating corruption; where poverty, hunger and starvation exhibits its face in the populace; where subversion of human value exists in abundance; where contract is inflated from government establishments; where state governors earn more than the US President (Schwemie, 2005; Ujah., 2015) and where its natural resources have become a resource curse.

5. Conclusions and Implications

5.1 Strategic Imperatives for Socio-economic Development

There is virtually no easy way for developing countries like Nigeria to get out of its hangar as World Bank (1992, 2012) was compelled by the sheer immensity of the setback to admit that low-income countries have comparatively few alternatives open to them for a strategic development. Undoubtedly, this appears to confirm that there is no single economic variable that can be manipulated to break through from a low to faster rate of economic growth. Notwithstanding in view of the findings on this paper and the unembellished reality of the present undesirable world's development imbalance, some options are open to ensure a better transformation.

Recipient Responsibility

When drawing up a new strategy for development, there would never be any development unless the recipients were sitting in the “driver's seat” determining their own priorities and finding their own solutions to the challenges of development. It entails transferring responsibility for planning, implementation, monitoring, and evaluation from the donor (DCs) to the recipient (LDC). All foreign debts may be written-off; but without the vital ability to manage and having in place, sound, coherent, and consistent well-implemented domestic policies and clearly defined national policies, development will remain a mirage to many developing countries. Macro-economic stability, continuous investment in human resources rather than in- military aircrafts jet fighters and non-productive ventures are essential for development. How fast a developing country grow may depend on the extent of which it is able to draw on advances in technology and management practices already made in industrial countries

Government Initiatives

This includes efforts to evaluate and improve the basic preconditions for good leadership, initiatives to improve financial administration by the Ministries of Finance, the Central Banks and other government bodies and reforms to improve the competence of government officials. As a watchdog function, it includes initiatives to improve supervision and control by government bodies such as the Auditor General and the National Assembly, Non-Governmental Institutions (NGOs), governing parties, the opposition, the media, and the civil society.

Dividends of Democracy

Governments' development efforts must trickle down to the people so that they can feel good and have a feeling that they have a sensitive government. Ensuring the socio-economic comfort of the people is the surest indication and the real challenge of good governance. This would ensure that the development efforts, policies and programmes of the government truly represent and reflect the requirements, yearnings, aspirations and desires of the citizenry and are influenced by the people for whom they are designed.

Investment, Not Aid

Perhaps there are often difficulties investing in developing countries may be due to unrealistic profit limitations, chronic uncertainty concerning tax law, frequent changes in foreign exchange regulations, restrictions to profit repatriation, expatriate quotas, indigenization programmes, and even the possibility of expropriation. Investment risk is a reality. Nonetheless, it is unquestionably better for developed nations to invest in developing countries than in ornaments and weapons of mass destruction. How long would Africa rely for its development on "aid" and investment "crumbs" as they trickle down from the table of richer nations? Where economic reforms are not supported with cooperation and a high dose of foreign direct investments (FDI), from western nations, developing countries are unlikely to develop as fast as they should.

Fair Trade Pricing

A one percentage point annual increase in industrial country production while other things remain constant –raises non-oil commodity prices by 2 per cent in real terms. Most developing countries unendingly wait till an industrial production upsurge is achieved by the West in order to obtain prices for their commodities? In contrast to oil, internal prices stabilization agreement for perishable commodities has not proved a very successful strategy. Industrial countries should be prepared, for the benefit of humanity, to genuinely put in place policies that would not accentuate the difficulties of primary goods producing countries. They should invest indirectly in agro-based technology that enhances the agricultural value added.

Sacrifice: A Requisite for Developed Countries

Whichever way we look at it, rich countries would need to make the easier sacrifice than calling developing countries to unfairly bear the full brunt. A starting point would be to relax the stringent quotas industrial countries usually impose on manufacturers from developing economies with good market prospects. Real transformation of the world's division of labour in favour of the latter is vital for the attainment of genuine development.

5.2 Conclusions

This research has attempted to present natural resources and socio-economic development as a composite variable. A country's natural resources may seem to reflect the beginning of development however, development is the desired end, which from the onset those natural resources sets out to achieve. Development is concerned with growth to maturity, the process of perfecting and fully realizing a country's natural resources in relation to the capacity of growing or developing.

The knowledge of the correlation between natural resources and socio-economic development is cardinal in fine-tuning policies aimed at eradicating worsening poverty. Indubitably, there is no conventional thread relationship between development and natural resources because the phenomenon works contrarily, depending on whether the consideration is on developing or industrial countries. The research has revealed that developing countries tend to overestimate their development potentials but the reality is that natural resources transcends the soil of natural endowments but include the seed of domestic investment and an educated human resource. This supports the initial proposition that, to successfully translate abundant natural resources into development, there must be wide cultural acceptance of the desirability to work and high aspirations. Clearly, human effort in the form of good leadership, continuous improvement in technology and history, all have a role to play in enabling a country to achieve much higher levels of development that can ordinarily be possible, based only on its natural resources.

Wealthy countries that control the world's economy must be ready to backpedal and make unprecedented sacrifices than they are presently willing to do for developing countries. More so, beyond economic reforms, developing countries desirous at transmuting their natural resources to development would need to galvanize internally. Succinctly, if the government does not function effectively, scarce resources will be wasted; if it does not have legitimacy in the eyes of the people it will not be able to achieve its goals; if it is unable to create national consensus around these objectives, no external assistance can bring them about; if it is unable to build a strong social fabric, the country risks disintegration and chaos; and equally important, if people are not empowered to take responsibility of their own development within an enabling framework provided by the government, efforts on development will remain delusive.

One of the limitations of the current study was the small sample size utilized based on the availability of data. Due to the constraint of unavailability of critical development indicators and the natural resources divergence in various countries, the study was under-powered, and thus, did not reach the number of samples that would have been desired by the researcher. This size has greatly reduced the generalizability of this study since other samples earlier used were not simultaneously tested along with the samples of this research. Also, because the research is country specific, its application may not be feasible for other forms of comparison in research analysis.

It may be helpful for future researchers to include other forms of natural resources and development indicators to drive a strong argument in order to establish new knowledge relating to natural resources and socio economic development. Also future researchers may also employ a standardized theory and methods of analysis to unravel the relationship between the two variables.

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Appendix A: Indicators of Natural Resources in Selected Countries

Country	Sq. Km Per 1,000 Population	2012 Literacy Rate %	Gross Capita Formation 2002-2012 (%)	2011 Proved Oil Reserved Bbl (Bln)	2012 Agric Value Added (\$ Bln)
Africa					
Gabon	166	89	3.8	3,7	0.71
Kenya	13	87	3.6	Nil	12.1
Libya	285	90	6.9	48.5	2.2
Nigeria	5.4	56.9	1.8	37.2	101.1
South Africa	23.2	94	2.1	0.015	11.5
Latin America					
Argentina	67	98	4.4	2.8	42.2
Brazil	43	91	6.2	14.0	0.11
Bolivia	103	94	5.3	0.5	3.5
Peru	43	94	7.6	1.2	13.5
Venezuela	29.4	96	4.7	297.7	22.9
Asia					
India	2.4	74	17.9	9.0	334
Indonesia	7.35	93	15.8	4.1	126.8
Iraq	13.3	79	3.8	140.3	6.7
Korea Republic	1.94	97	14.3	Nil	26.8
Singapore	0.13	96	15	Nil	0.089
OECD Countries					
Australia	333	96	9.8	4.2	30.6
Germany	4.32	99	1.5	0.3	34.3
Japan	2.85	102	2.5	0.04	65
UK	3.80	99	2.7	6.9	14.3
US	29.1	99	3.6	26.5	162.4

Source: World Bank Development Indicator (2014); UNESCO (2013); UNICEF (2014); World Fact Book (2014); World Bank National Accounts & OECD National Accounts (2013); OPEC World Proven Crude Oil Reserve by Country.

Appendix B: Indicators of Development in Selected Countries

Country	2012 GNI (\$)	2012 Life Expectancy	1980 -2012 Annual Growth in GNP/cap	2012 School Enrolment, Secondary (% Gross)	2012 Value of Manufacture
Africa					
Gabon	10,040	63	1.9	54	\$0.71bln
Kenya	870	61	1.9	74	\$4.03bln
Libya	12,930	75	1.0	86	\$4.5bln
Nigeria	2,490	52	2.3	44	\$32.1bln
South Africa	7,460	56	1.1	102	\$45.9bln
Latin America					
Argentina	11,363	76	4.9	92	\$102.5bln
Brazil	11,640	74	0.5	87	\$292.3bln
Bolivia	2,220	67	1.9	77	\$3.5bln
Peru	5,890	75	6.4	90	\$0.29bln
Venezuela	12,460	74	3.5	85	\$53.4bln
Asia					
India	1,550	66	3.1	69	\$260.2bln
Indonesia	3,420	71	4.9	83	\$210.4bln
Iraq	6,130	69	3.1	79	\$21.6bln
Korea Republic	22,670	81	8.5	97	\$379.11bln
Singapore	51,090	82	0.2	94	\$57.4bln
OECD Countries					
Australia	59,790	82	2.9	136	\$122.6bln
Germany	45,170	81	2.5	101	\$753.7bln
Japan	47,870	83	1.7	102	\$1.1bln
UK	38,500	82	0.2	95	\$246.2bln
US	52,350	79	1.7	94	\$2,274.2bln

Source: World Bank Development Indicator (2014); UNESCO (2013); UNICEF (2014)

Appendix C: Country Natural Resources Appraisal Score Sheet

Country	Sq. Km Per 1,000 Population	2012 Literacy Rate %	Gross Capita Formation 2002-2012 (%)	2011 Proved Oil Reserved Bbl (Bln)	2012 Agric Value Added (\$ Bln)	Total Scores
Africa						
Gabon	5	4	4	1	1	15
Kenya	3	4	4	1	3	15
Libya	5	4	5	5	1	20
Nigeria	2	1	2	5	5	15
South Africa	5	4	3	1	3	16
Latin America						
Argentina	5	5	5	1	5	21
Brazil	5	4	5	3	1	18
Bolivia	5	4	5	1	1	16
Peru	5	4	5	1	3	18
Venezuela	5	5	5	5	5	25
Asia						
India	1	2	5	2	5	15
Indonesia	2	4	5	1	5	17
Iraq	3	3	4	5	2	17
Korea Republic	1	5	5	1	5	17
Singapore	1	5	5	1	1	13
OECD Countries						
Australia	5	5	5	1	5	21
Germany	1	5	2	1	5	14
Japan	1	5	3	1	5	15
UK	1	5	3	2	3	14
US						

Appendix D: Country Development Appraisal Score Sheet

Country	2012 GNI Per Capital (\$)	2012 Life Expectancy	1980 -2012 Annual Growth in GNP/cap	2012 School Enrolment, Secondary (% Gross)	2012 Value of Manufacture (\$Bln)	Total Scores
Africa						
Gabon	3	2	1	3	1	10
Kenya	1	3	1	4	1	10
Libya	3	4	1	5	1	14
Nigeria	1	1	2	1	1	6
South Africa	2	2	1	5	5	15
Latin America						
Argentina	3	4	4	5	5	21
Brazil	3	4	1	5	5	18
Bolivia	1	3	1	4	1	10
Peru	2	4	5	4	1	16
Venezuela	3	4	3	4	5	19
Asia						
India	1	3	2	3	5	14
Indonesia	2	3	5	4	4	18
Iraq	2	3	3	2	4	14
Korea Rep	4	4	5	5	5	23
Singapore	5	5	1	5	5	21
OECD Countries						
Australia	5	5	2	5	5	22
Germany	5	4	2	5	5	21
Japan	5	5	4	5	4	23
UK	5	5	3	5	3	21
US	5	5	2	5	5	22