

## **Natural Assets and Industrial Transformation in Cross River State: A Political Economy Perspective**

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### **ABSTRACT**

This work addresses itself to the fundamental necessity of the utilization of natural assets for industrialization in Cross River State, against the backdrop of the State's inability to transmute its potential assets to real assets. The work essentially adopted the descriptive procedure of analysis, having collected data from secondary sources. The work situated its argument within a radical political economy context, and articulated the need for government to promote a pump-priming strategy of industrialization in Cross River State. To this end, the work, which dwelled largely on solid mineral assets endowed the State, classified the minerals into seven categories of industries that are possible in the State. The work also accentuates the point that given the rich agricultural land in the State, government should in addition to solid minerals based industries, promote agro-allied industries. Finally, the work avers that the ruling class in the State should shift away from the prevailing rent-seeking behaviour, to a visionary and strategic thinking leadership with imagination to industrialize the State, and that the people in turn, should brace-up to support the expected industrial policy framework of government.

## INTRODUCTION

Cross River State was created out of the South Eastern State of Nigeria, which was part of the collectivity of the old eastern region of the first republic. The old Calabar which remains the capital of cross River State was one of the imperial posts of the British Colonial rule in Nigeria. Calabar was regarded as an important trading and cultural centre by the British colonial masters. By the 19<sup>th</sup> century, the Cross River State capital(Calabar), had become the Headquarters of British parastatals in the Niger coast protectorate and later, Calabar became the first capital of southern Nigeria as constituted by the order- in-council of 1897( Jaja and Andah 1990, cited in Bekeh, 2000:47).

Historically and specifically, Cross River State was created following the reconfiguration of Nigeria into a nineteen state structure. In 1987, Cross River State was one of the two states created from the south-Eastern state. The state as presently constituted, is situated in the rich tropical region of Nigeria. Its potential assets for now remain largely untapped for industrial development. Successive governments in the State have either consciously or unconsciously made efforts at tapping these natural assets to no avail. The first republic perhaps was the period where the regions of the country utilized part of their natural endowments for economic empowerment but without considering industrial transformation using their so endowed natural assets. During that era, the regions promoted the production of cash crops and established produce marketing boards. The marketing boards regulated and encouraged agricultural production in terms of price regulation and stabilization, as well as the introduction of some species of crop seedlings. The South Eastern regional effort at that time concentrated on the economy of agriculture and made no reasonable effort to promote products outside agriculture. The natural assets such as solid minerals were jettisoned, and they at best only received mention as they were left out of the calculus of the regional economy.

Cross River State has since its creation been characterized as a civil service State, in view of its glaring incapacity to develop its industrial sector. The possibility of industrializing the State became further infracted among other things following the mono-cultural economy imposed by the federal military government on the country as crude oil became the dominant source of economic interchange for the country. In view of this, the State like other States in the country faces the challenge of natural resources capture in view of the Land Use Act 1978 subsequently enshrined in Article 44(3) of the 1999 constitution of the federal republic of Nigeria as amended. The Land Use Act gave the ownership of all land in the country and properties there-in to the federal government of Nigeria. By that 1978 Act, the States of the federation were left to their discretion on natural resources exploitation, depending on their position on the scale of the power play equation in the Nigerian political system.

It can be recalled that the federal military government under Gowon put the production and ownership of oil and gas under the ambit of the federal government, in the pretext that the oil

resource (petroleum) was only being so ceased courtesy of the Petroleum Act 1969, to prosecute the Nigerian civil war which ravaged the country between 1967 and 1970. The Act was not revised after the war, having put free money in the hands of the military junta. The result was a mono-cultural economy (Awa, 1988: 32-50). This situation plagued the country with an economic disadvantage that could not allow the diversification of the economy. It is paradoxical that in spite of the bountiful presence of natural assets in the State, the people are languishing in abject poverty, while government institutions and political structures are poorly managed to deny the masses of political goods and services. Two sets of people that largely constitute the demography of Cross River State are badly affected by the government ineptitude towards industrialization. They are the civil servants and the peasants who are impoverished as government plans toward industrialization is consumed in a crisis of mission, just as the philosophy or orientation of government for development is diffused. But some scholars have argued that there is a link between natural resource endowment and industrialization. For instance, Awa (1988:32-50) tells us that: “We can use our mineral endowment specifically to (a) eradicate poverty, ignorance and diseases and.....(b) assure the self-reliance of a nation and the state of general preparedness that would secure the nation in its buffer zone”.

In his writing on natural resources and national economic competition, Rourke (1999:425) discusses the increasing importance of natural assets to national empowerment. For him natural assets have become an important power factor, stating that it is a potent factor for industrialization. He however warned that:

Even if a country is bountifully supplied with natural resources, its power is limited unless it can convert those assets into industrial goods (Rourke 1998:426)

The significance of natural assets articulated by Awa and Rourke over natural resources and State empowerment are yet to permeate the development practice of the ruling class in Cross River State given the poor development strategy and conditions in the State. Thus, in spite of the State's rich natural assets, the State and its people are still wallowing in poverty or life of idiosyncrasy. In other words, there is a kind of disconnect between natural assets and industrial development in Cross River State. So far, what is known as the best strategy for the industrialization of the State is contained in the State vision statement 2009-2012 hatched by Donald Duke's administration, under the auspices of the “Cross River State Economic Empowerment and Development Strategy 2”. Incidentally, the plan was Duke's industrial revolution in the area of modern tourism and agriculture in the State. Duke's administration 1999-2007 took up the development of tourism sites in the State. The sites were largely located in Obudu and Calabar. The tourism agenda was predicated essentially on the flagships for driving development particularly in the area of agriculture and tourism. Agriculture still remains at the level of subsistence, without agro-allied connection. Although the macroeconomic performance of the State showed improvement in the short run, as it was comparable to national and sub-national performance aggregates and as exceeding the average performance of the south-south and the Niger Delta, but this neither took the State and people out of their poverty

conditions nor brought sustainable socio-economic development which was the long-term destination of the strategy (CRSEE&DS2, 2009-2012:14).

The subsequent administration of Governor Imoke that came after Governor Duke derived its seven-point agenda from the strategic plan hatched by Duke. The focus of Imoke was on agriculture, investment promotion, transport, social welfare and forestry. The vision of Imoke's administration like that of Duke includes:

- (a), to make cross river state the leading state in agricultural production and agro allied industries toward economic wellbeing and prosperity of the people of the state.
- (b), to make cross river state the nation's investment hub thereby ensuring socio-economic development; and
- (c), to provide enabling environment for easy access to land, attracting investors and housing development.

However, the evaluation of both Duke and Imoke's strategies contained in the CRSV 2020 document shows that the so articulated strategies were not successful due to certain challenges such as:

- (i), that agriculture production skills were at subsistence level with slow or no adoption of new technologies.
- (ii), credit facilities were not widely accessible.
- (iii), there were high level of vocational and technical illiteracy among educated and semi-educated population.
- (iv), high transaction costs, excessive taxation and rent-seeking behaviour among communities and groups.
- (v), excessive fragmentation of farm lands, and
- (vi), absence of clearly defined support programmes and incentives for promoting investment and entrepreneurship (CRSV 2020:21).

Be that as it may, the State government strategy for industrialization though focused on agro allied industrialization and economic empowerment has left no one in doubt about the unsuccessful quest of government over industrialization. What is however amazing is the fact that nothing is said about solid minerals in the government Millennium Development Agenda (MDA) in spite of its enormity in the State. It is also notable that there is a disconnect involving agricultural production and agro allied industrial development. These two moments form the core of the problematique of this work and on account of which the work aligns with the pump-priming strategy for the industrialization of the state. Thus, the major focus of the work is to answer the question of what the State stands to do with solid minerals that have been neglected

and schemed out of the calculus of government plans for sustainable development. These clearly observed gaps accentuate the significance of this discourse perhaps in view of the physical conditions that characterize the socio-economic existential problems in the state. It is therefore apparent that in view of the growing poverty in the State, and the fact that the prevailing focus of government on agriculture and tourism failed to capacitate sustainable industrial development that it becomes necessary that more epistemology in this area is encouraged.

What is so far clear is that Cross River State has potentials for both agro-allied and solid minerals industries, given the inventory of the Ministry of Solid Minerals Development of Nigeria (Feyide, 1982:19-27) and other studies cited in this work. It is also clear that, while the State's strategy for industrialization is so far tilted towards peasant agriculture and tourism which have not really empowered the people, a reappraisal of the State's natural assets to determine their utilization for industrialization is critical.

It is already a historical fact that the process of industrial revolution in Europe started with the exploration of solid minerals (Nwoke, 2013:16). Therefore, this work essentially addresses itself to the utilization of the natural assets of the State for industrial transformation, and to the central question as why in spite of the natural endowment of the State with solid minerals; the State is finding it difficult to industrialize. The paper thus proceeds with the claim that the utilization of solid minerals is a *sine qua non* for the industrialization of the State. The work essentially is analytically descriptive, and is organized in five sections. Section one is the introduction. Section two brings in the conceptual prologue. In section three, the work examines the political economy of natural assets in Cross River State, while section four takes on the solid minerals and possible industries in the various parts of Cross River State, section five concludes the work.

## CONCEPTUAL PROLOGUE

Some of the concepts used in this work impose a responsibility of clarification in order to facilitate their understanding and to show how they are applied in the work. The concepts include: natural assets, industrial transformation, and political economy.

*Natural Assets:* Generally, natural assets are God given environmental wealth such as agricultural land, soil minerals, water and atmospheric conditions, etc, which contribute to the development of people and society. Empirically, there is a close link between natural assets and the pursuance of economic statecraft. If natural assets are properly utilized, they can provide the basis for building a powerful economy (Rourke, 1999: 422). For Rourke, State assets involve "natural assets, financial position (GDP), industrial output, agricultural output, and international competitiveness, which for him are state power factors". The Longman English Dictionary (2001:28) describes asset as "a person or thing that helps you to succeed". Also, the Oxford Dictionary 6<sup>th</sup> Edition sees 'asset' as "a valuable or useful thing especially property that a person or company owns. It is along this tune of thought about 'asset' that this work considers the natural assets of Cross River State to include the State's fertile agricultural land and solid minerals, as well as the quality of its people as hardworking, to be powerful motive factors for



industrial transformation of the State. What is obvious is that State natural endowment ought to be utilized or mobilized by the State power to supply the needs of the people using the instrumentality of industrial development. For instance, the agricultural asset can be mobilized for the establishment of agro-allied industries for the socio-economic empowerment of the masses.

Unfortunately, what we are witnessing in the State, like in the rest of Africa, is an inverse relationship between bountiful assets and industrial development. This situation has forced some scholars to talk about the paradox of resource curse in Africa (Todd, 2007: 65). This implies that something is fundamentally wrong with development planning in Africa. Cross River State is also guilty of this ineptitude because in spite of rich land its people are poor. There are two moments which characterize the contention of this work in this circumstance, and over which this work is shifting away from the prevailing focus on resource curse or capital shortage and comparative advantage to a radical focus on pump-priming strategy of facilitating industrialization. The first moment concerns the resolve that the process of industrialization in Cross River State could necessarily begin with local technology (local skills and techniques) as was the case in South Korea. In the second moment, the work unequivocally makes an empirical demonstration of the typology of industries that are possible given the natural assets available in Cross River State.

*Industrial Transformation:* The concept of 'industrial' refers to the making of utilities usually in factories. It is a life-style or culture of production of things from raw materials. Transformation, on the other hand, implies change in such a way that the state of a phenomenon shifts from its present appearance to a better appearance. Therefore, industrial transformation can be said to be a paradigm shift from the idiosyncratic peasant and crude mode of production to a situation characterized by industrial production, where utilities are created for advanced economic interchange. This type of transformation sometimes called industrial revolution, has occurred in some parts of the world including Europe, America, and the recent example being the experience of the Asian tigers. In Europe, the industrial transformation (industrial revolution) that began in the eighteenth century brought transformation that increased productivity and supply of goods in the world economy, and that eventually brought down the mercantilist paradigm, to give Europe a pride of place in the global economic interchange.

*Political Economy:* The logic of political economy provides us with a potent iota for exploring the subject matter of this work which essentially underscores the dynamic interaction of the parallel existence of the State (politics) and Market (economics). The logic of political economy tells us about the connection between State wealth and citizen empowerment. This implies that the State must acquire the factors for wealth creation, such as industrialization. In his definition of political economy, Robert Gilpin articulated the point that the two most important social institutions under which political economy operates are state and market. Gilpin sees the 'State' as the political institutions of modern nation-state, with a relatively coherent and autonomous system of government, among others. For him, the 'market' is the realm of individual actions, usually structured around economic institutions of modern capitalism (Iwara, 2009:2). Classical

scholars such as Adam Smith, David Ricardo and others, see political economy as the transition from growth to development. For this group of classical economists, what they seek to examine is how the State is transitioning from growth to development. It is also along this tune of thought that Olopoenia (1998: 6) conceived that political economy deals with the issues of growth accompanied with development. To him, for growth to be accompanied with development, the increasing public wealth must be instrumental to the greater generalized access to basic essentials of life. This means that political economy is concerned with the idea that the people of society should draw strength from the wealth of society if only the society must experience development. This work adopts this conception of political economy, in view of its believe that governance in Cross River State should be based on the core values of political economy, particularly involving industrialization through the use of natural assets to provide economic empowerment to the people.

### THE POLITICAL ECONOMY OF NATURAL ASSETS IN CROSS RIVER STATE

The literature in derivative development shows that natural assets can indeed facilitate the link between industrialization and economic development (Iwara, 2016:50-56). To this end, there is a connection between natural assets such as agricultural produce, solid minerals and abilities to transform them to create material utilities. Sutulov (1972:9) eulogized the significance of natural assets, stating that:

Man is predominantly oriented towards his natural medium

For all supplies he needs for maintaining life and constructing his civilization. And this medium is overwhelmingly inorganic and mineral in its origin.

The foregoing view about natural assets confirms an all time perception that such assets and their products constitute the basis of all industrial production, just like they form the core of modern civilization. The Nigerian State did not just lose this opportunity but also went ahead to deny state units in the federation of their natural endowments by the Land Use Act 1978, which supposes that all land and properties there-in belongs to the federal government. This Act perpetuated a double jeopardy which was the political attitude of the then unitary military government of Nigeria, which focused almost completely on oil to give Nigeria, a mono-cultural economy. The mono-cultural economy ensured that Nigeria's diverse natural assets were either underutilized or neglected, as attention of government was focused on the oil largesse (Nashuni, 1991:5). Thus, even up to the time of putting this work together, the concentration on oil and gas by government continues to ignore other mineral assets especially solid minerals.

In Cross River State, there is a plethora of natural assets which the State is yet to utilize, ranging from agricultural to solid minerals. Agricultural produce has still not gone beyond the peasant

level, operating below mechanization. The main stay of the poor economy of the State is peasant farming. The bulk of the foods produced in the State are perishable, this situation creates the necessity for investors to utilize the excess of these crops for industrial processing. There is also the need for investors to invest in such areas as cold storage and preservation given the perishable nature of the crops. It also follows that because of the agrarian nature of the state, the promotion of agro-allied industries generally will not be out of place. The government of Cross River State is for now paying only rhetorical attention or lip service to agro-allied industrialization.

However, apart from the rich agricultural assets, the State's geological composition requires that our attention is drawn to the solid minerals which abound in all local government areas of the State. Some geological and natural resources surveys and papers vividly vindicate this assertion. For instance, Bassey (2010) and Nwoke (2013) confirmed that several mineral deposits abound in the State. The work of Bassey gave an array of the solid minerals including metallic; Gemstone; energy and fuel. On the other hand Nwoke explicitly showed that the state is one of the states in the Nigerian federation bearing minerals in large quantum and went ahead to explain their economic circumstances. This means that Cross River State has what it takes to promote the industrial sector in the State. Some notable scholars in state developmentalism confirm this supposition. For instance, Payne and Nassar(2006: 137) argued that mineral resources are crucial in building the initial stages of development. For them, the United States with abundant mineral resources developed rapidly.

Some countries in the developing world have also achieved reasonable level of development due to their ownership of mineral resources. This applied to the South African economy built on gold and copper, while the economy of Botswana was developed principally with diamond. Some countries in the Middle-East including Saudi Arabia have used oil to moderate their economies. However, there are clear indications to prove that development under the auspices of natural resources does not occur in a vacuum. This means that irrespective of the availability of natural assets, development can be missing if certain factors are unavailable. These factors include, Effective leadership, Entrepreneurship, Infrastructure, Philosophy of development, and access to local and international markets. The lessons of these factors are as follows:

**Effective Leadership:** This is a necessary condition for visionary administration and industrial transformation. This factor was the case in countries where substantial development has been recorded in industrial transformation such as the US, China, Japan, the Koreas, and others. Without effective leadership, it is arguably virtually impossible to achieve industrial transformation. Leadership is generally a process in which a person influences others to accomplish an objective or task, and in a way that makes it more cohesive and coherent (Northouse, 2003:3). Northouse gives the essential qualities of effective leadership as including competence, accountability, openness, integrity, language use/relationship, and community values, etc. These qualities are diffused in the leadership exhibited by political leaders in Cross River State.



Entrepreneurship: Essentially, entrepreneurship involves the capacity and willingness to develop, organize, and manage a business along with its risks in order to make a profit. The Business News Daily agrees that though there are common traits that entrepreneurs share, but an average entrepreneur is typically confident and self motivated ([www.businessdaily.com](http://www.businessdaily.com)). Unfortunately, the kind of environment and orientation prevalent in Cross River State is such that favours consumption rather than production. Such a situation is unfertile for entrepreneurship, given the fact that the entrepreneurship quality involves skills and risks. Entrepreneurship attitude is certainly necessary if Cross River State will experience industrial transformation. For this to be possible, the school system in the State would have to include a curriculum of entrepreneurship well focused on the philosophy of the State for industrialization.

Infrastructure: This factor has to do with the fundamental facilities, equipment, and systems that can facilitate the creation of utilities or the manufacturing of products, including basic and permanent frameworks or features satisfactory enough to facilitate industrialization. Some of these infrastructures include technology, power, water, accessible roads, and efficient transport systems among others.

Access to Local and International Markets: Industrialization remains meaningless if the products of the industrial scheme cannot find expression in local and international markets. The market access in reality reveals a lot about the industry, including its quality and efficiency. African countries are deficient of this variable in the global economic interchange, and the most reason why mainstream arguments emphasize the imperialist principle of comparative advantage. This according to this school of thought is because of the lack of productive capacity, and also the fact that the products of the poor world cannot meet international standards ([www.un.org/press](http://www.un.org/press)). The above critical factors among others are so illuminated because they are part of the proposition for industrialization envisaged in this work. Unfortunately, the various reports of the State government indicate that these factors are lacking in the State, thus requiring that the State gives attention to them, as the State hopefully returns to the 'drawing board'.

What is so far clear, given the governance and development reports considered here is the myopic behaviour of the ruling class towards industrialization planning. It is also clear that attempts made so far over industrialization were sub-optimal and mainly through peasant agriculture and tourism. Therefore, to unbundle the State out of this illusion, there is need to adopt a holistic strategy of industrializing the State, this time, focusing largely on solid minerals that abound the State, but usually abandoned. It is on this note that the work returns to the next section focusing on solid minerals.

## SOLID MINERALS AND POSSIBLE INDUSTRIES IN CROSS RIVER STATE

In this segment of the work, the contention bothers on the solid mineral assets and how the State can strategically utilize them to make Cross River State an industrial State. The data collected are herewith presented in seven tables showing the mineral resources, their location, and their possible industries. The tables show the categories of the minerals as: (i) Ceramic and Building;

(ii) Strategic Minerals; (iii) Iron and Non-ferrous Metal minerals; (iv) Fuel minerals; (v) Steel Minerals; (vi) Chemical minerals; and (vii) Precious Metals/Gemstones minerals, and their implied industries.

TABLE 1: Ceramics and Building Minerals

| Minerals   | Specific location in CRS  | Possible Industries  |
|------------|---|--|
| Barites    | Yala (Alifokpa), Yakurr (Agoi), Biase (Akpet), and Abi(Onyi)  | Soaps Manufacturing and Mud Drilling Industries  |
| Clay       | Akpabuyo(Qua Town,Indunnu), Bekwarra (Ajibo), Calabar South, and Obanliku(Bendigie)                             | Bricks Manufacturing   |
| Glass Sand | Calabar South(Henshaw Town Beach, Obudu(Okorotong hille), Ikom, and Akamkpa(Oban)                               | Glass Manufacturing Industries   |
| Lime Stone | Obubra(Ofat, Ochon-Isabang Rd), Akamkpa(Mfamosing) Abi(Ogoho),Biase(Akawibami) Obanliku(Bebi) and Yakurr (Ugep) | Cement, Lime production for fertilizer, and fluxing stone for Iron-smelting industries |
| Sharp Sand | Abi, Calabar South, and Calabar municipality  | Blocks Industry  |

Source: Compiled from the works of Bassey (2010) and Nwoke (2013)

Table 1 indicates the industries of ceramic and building minerals in Cross River State. The mineral so endowed are barites, clay, glass sand and limestone. These minerals have industrial implications as follows:

Barites, located in Alifokpa in Yala, Agoi Ibami in Yakurr, Onyi in Abi and Akpet in Biase of the State can be used in soap manufacturing and drilling mud in oil companies. Investors can develop the mineral for a market relationship with oil companies where barites are usually needed. As a soap manufacturing mineral, barites would provide opportunity for soap industries to be set up. Apart from creating employers of labour, as the industries could commence with local technology, they can also contribute to the economic development of the State. Clay is found in Akpabuyo, Calabar municipality, Calabar South, Obanliku, and Bekwarra. Clay is useful for setting up building industries essentially for the manufacture of bricks. Bricks have the advantage or superiority over cement blocks because they enjoy long life span and not easily destroyed by fire. The State Housing Corporation can utilize bricks to support the State's housing scheme, and the mineral can also be used as a catalyst to boost the construction industry. The industry can be run with local technology

Glass Sand, otherwise known as Silica is found in Henshaw Town beach of Calabar South, Okorotong hille of Obudu, and Ikom. Glass Sand makes about 65% of the total concentrates or

mix from which glass is produced. The quality of glass sand mineral in the State is such that can facilitate the production of inputs that can make glass manufacturing in the State completely local (Nwoke, 2013:21). The possibility of huge employment is also possible in glass manufacturing.

Limestone is found in several places in Cross River State such as Akamkpa, Biase, Abi, Obanliku, and Ugep in Yakurr. Limestone is basically a sedimentary rock composed largely of skeletal fragments of calcium carbonate. It is used as a key ingredient for the manufacture of cement. The mineral acts as fluxing stone for iron smelting, filler in petrochemicals, and in lime production for fertilizer. It is also used by steel companies. The Calabar Cement Company (CALCEMCO) uses it as a major raw material for the production of cement. The State can expand its production and find more market relations. Lastly on table 1, is Sharp Sand, which is essentially a solid mineral for molding blocks used in the building industry. Sharp Sand is located in Abi, Calabar South and Calabar municipality.

Table 2: Strategic Minerals

| Mineral | Specific Location in CRS      | Possible Industries |
|---------|-------------------------------|---------------------|
| Uranium | Ugep and Agoi Ibami in Yakurr | Weapons and Energy  |

Source: Newswatch Magazine, 10 November, 1980

Uranium is found in Ugep and Agoi in Yakurr Local Government area of Cross River State. It is a chemical element used for the production of atomic bomb. It is primarily used in the generation of energy. In view of its nature, uranium passes as a strategic mineral, following its military uses. Its other industrial uses include construction of space vehicles, electricity-producing nuclear reactors, etc. (Newswatch, 1980:10). It is our expectation that the uranium endowment would give the State government the opportunity to enter into exploration and market relations with the Defense Industrial Corporation of Nigeria and other military industries.

Table 3: Iron and Non-ferrous Metal Minerals

| Mineral  | Location in CRS           | Possible Industries                    |
|----------|---------------------------|--|
| Iron Ore | Adagom-Ishibori in Ogoja  | Roofing Sheets and Pipelines           |
| Tin Ore  | Bekwarra, Biase and Ogoja | Plates, Cans, Alloys, etc.             |
| Lead Ore | Obubra and Obudu          | Batteries, Pigments, Sewer pipes, etc. |

Source: Nashuni (1990:2) Minerals as Raw Materials for Nigeria

As indicated in Table three above, Iron ore is found in Adagom-Ishibori in Ogoja Local Government area. This mineral is a necessary requisite for Iron and Steel based industry. It can equally be used for the production of pipelines. Nigeria's Iron and Steel industry would find it as a key mineral. Tin Ore found in Bekwarra, Biase, and Ogoja, is a potent mineral for the plates making industry. It is also an important raw material for Cans production, Calico-printing, dyeing, and high quality soldering. Lead Ore which again is another mineral in this order is used by industries producing pigments, Cable Covering, Batteries, and water and sewer pipes. It is as well useful in producing glass. The lead ore mineral is found in Obubra and Obudu.

Table 4: Fuel Industries

| Mineral   | Location                     | Possible Industries                                       |
|-----------|------------------------------|---|
| Coal      | Akamkpa                      | Carbonization, Petrochemical, and Agricultural Industries |
| Petroleum | Akpabuyo, Bakassi, and Ogoja | Fuel, Gasoline, Electricity generation, Plastics, etc.    |

Source: Compiled from Nwoke, 2013

There are two types of minerals found in Cross River State that can make the fuel industry. The minerals are Coal and Petroleum. While coal is found in the eastern flanks of Akamkpa, petroleum is located in Akpabuyo, Bakassi, and Ogoja. Coal is applied for energy generation particularly the generation of electricity. It can also be applied as chemical feed-stocks to the down-stream industries in the agricultural, pharmaceutical and manufacturing sectors. Petroleum on the other hand, contrary to insinuations that Cross River State is no longer a petrol bearing State, it is incidentally found in Akpabuyo and Ogoja apart from Bakassi which is in the calculus of the federal government. Apart from the conventional use of petrol as fuel, petrol can equally be used to generate electricity among others.

Table 5: Steel Industry Minerals

| Mineral   | Location | Possible Industries   |
|-----------|----------|-----------------------|
| Manganese | Akamkpa  | Steel making Industry |

Source: Nwoke (2013)

Manganese is found in the Oban rubber estate of Akamkpa. Manganese and iron ore are the most vital non-fuel mineral used for steel production. It is an alloying metal usually required to produce any type of steel. Thus, the demand for manganese would give the state heavy patronage by steel companies.

Table 6: Chemical Industries

| Mineral | Specific Location in CRS | Possible Industries                            |
|---------|--------------------------|--|
| Salt    | Abi, Obubra, and Etung   | Caustic soda, Food processing, Water treatment |

|        |                              |   |
|--------|------------------------------|---|
|        |                              | and Chemical manufacturing  |
| Kaolin | Calabar, Bakassi, and Obubra | Paper Industry, Ceramics, Fertilizers, Insecticides and Chalk industries. |

Source: Bassey (2010:9)

The minerals for chemical industries found in Cross River State are salt and kaolin. Salt is found in Abi, Obubra, and Etung. Salt is generally used to meet the general food requirements of the society. It can lead to the establishment of cottage salt industries in the areas bearing it. Bye-salt industries such as water treatment, detergent and caustic soda can be established. Salt is also used by petro-chemical industries. The petroleum industries alone use not less than twenty thousand tons of salt per annum (Nwoke, 2013:28). Kaolin is another chemical mineral in Cross River State. It is found in Ikot Omin of Calabar Municipality, Bakassi (offshore), and Allege, Mbanega, Betukwe and Bebuabong of Obudu. It is a white chemically inert powder. The refined kaolin is a major raw material in industries such as paper, ceramics, plastics, and paints. It is also used for the production of fertilizer and drugs, especially stomach powder.

Table 7: Precious Metals/Gemstones

| Minerals | Specific location in CRS | Possible Industries                             |
|----------|--------------------------|---|
| Gold     | Akamkpa                  | Money-making, ornaments, etc                    |
| Silver   | Ogoja                    | Jewelry, photography, and Electronic industries |

Source: Nashuni (1990:7)

Table 7 shows the availability of Gold and Silver in Cross River State. Gold is located in Akamkpa, while Silver is located in Ogoja. Gold can be used to make money in coins, jewelry, and ornaments. It can also be used to integrate electronic circuits and in dental and medical supplies (Nashuni, 1990:7). Silver is found in Ogoja, and its major uses include photography, silverware and jewelry. Silver is also considered a strategic mineral in the advanced world.

## CONCLUSION

In conclusion, this work would want to dwell on the development of a strategic process of industrialization in Cross River State, given the gamut of solid mineral wealth in the State. There is a noticeable miss-match in view of the poverty level in the State and the gamut of the natural assets the State is endowed with. This makes the rebranding of the State's development policy a fundamental necessity. This, we suggest should involve a radical intellectualist process of industrialization using largely the State's solid minerals. The State's industrialization philosophy or thinking should target emancipation or liberation of the people of the State. To this end, two moments are important. The first is to promote agro-allied industries from the State's agricultural produce, and in the second moment, we suggest that the solid mineral wealth of the State, should



lead to the promotion of mineral industries herewith classified along industrial lines. The classification is presented in seven tables each of which elucidates the uses of the minerals

However, it is important to note that for Cross River State to achieve an industrial climate the political leadership will have to evolve a vision to empower and restore the people's right to a life of dignity that is currently trampled upon by an industrially myopic and unimaginative leadership class in the State. For the industrial process to be realized, the following key factors have to be put in place:

- (1) **Technology Policy:** This is one of the impediments of industrialization in Third World States. It is also one of the reasons why the poor world is subjected to imperialist minerals exploitation under what mainstream scholars regard as comparative advantage. In other words, technology is one of the deficiencies that have denied Third World States particularly of Africa, the ownership and control of their natural assets. This situation engineered the mainstream thinking of comparative advantage, over which poor nations are confined to the supply of their God-given endowments to the technologically rich capitalist economies. This work shifts away from this main stream thinking to a focus on addressing the shortages of the forces of production and the inadequacies of the relations of production. To this end therefore, industrialization in Cross River State can be realistic at the instance of basic availability of technology, that is, basic skills and techniques as well as the intellectual/labour power for industrial processing. It is on this note that the proposition of Iwara (2015: 4340-4345) is apt for the State in Africa. Iwara's alternative perspective for technology acquisition for African States suggests that the African traditional skills and techniques can be used for Africa's development. This implies that Cross River State can therefore promote and reinforce these traditional skills and techniques in the State for the processing of the mineral wealth of the State. It is also important for the State to set aside at least 2% of its annual budget for the promotion of technological development to sustain industrial development, and build partnerships with technology holders such as Germany, Switzerland and China.
- (2) **Philosophy or Orientation of Development:** In addition to a sound technology policy, the State would have to orientate its citizens along the critical essence of its industrialization thinking. This involves a general framework of knowledge made available in the State and the understanding created for the people about how they can draw empowerment from the epistemological resources put together by the State. This is necessary because without the involvement of the people, sustainable industrial development will be an illusion.
- (3) **Industrial Output:** Industrial output is important in several economic respects, and should be co-present with State industrialization thinking. It essentially involves the measurement of output by the industrial sector of the economy. Industrial output is an important tool for measuring and forecasting Gross Domestic Product (GDP) and the economic performance in the State. The industrial output figures are also used to measure economic variables such as inflation because high industrial production levels can lead to

uncontrolled levels of consumption. Thus, as the State sets out to industrialize, the output of the industrial sector would help to regulate the economy. The State, in view of its serious industrial output, could achieve state-craft which can only be possible when it shifts away from the prevailing rent-seeking character in the State to an industrially visionary and strategic thinking leadership with imagination to deliver good life to the people of the State.

- (4) Ownership and Control of the Mineral Sector: The State government should move to negotiate with the federal government for the re-possession of the mineral resources in the State, in view of the Land Use Act 1978 under which all land in the Nigerian federation government's self acclaimed ownership of all land and properties there-in in the country. Already, some States such as Enugu have started discussions with the Federal Minister of Solid minerals over their intentions for their coal. There is need given the enormity of poverty in the State, for the State to seek autonomization or cooperation to explore and control its natural endowment. The government therefore should sound strategic and convincing in its commitment to move the State out of the ecology of poverty, to be accorded the high ground to own and control its solid minerals.
- (5) Finally, the issue of industrialization in the state is crucial requiring government to take proactive steps to facilitating pump-priming development. There is also need for the State government to allow the experience of the Asian States to influence its industrialization process in view of the fact that the historical experience was similar.

## REFERENCES

- Awa, E (1988) The Use of Nigeria's Mineral Resources as a Weapon, in Nigerian Journal of Policy and Strategy, June 1988 pp 32-50
- Bassey, A. O. (2010) Availability and Development of Solid Minerals found in Cross River State, paper delivered at the 4<sup>th</sup> Dredging Summit and Exhibition, Calabar, September 22-24
- Bekeh, U. (2000) Rediscovering our Identity as Africans, Dominican Institute, Ibadan
- Feyide, M. O (1982) The Nigerian Mineral Industry: Realities and Options, Nigerian Journal of Mining and Geology, Vol. 1 No. 1
- Iwara, I. E. (2015) International Politics of Technology and Its Implications for Development in Africa, International Journal of Development Research, Vol.5 Issue 05, pp4340-4345
- Iwara, I. E. (2016) State Capture, Environment and Nigeria's Political Economy, in Journal of Advances in Social Sciences and Humanities, Vol. 2, No. 5
- Nashuni, M. (1991) Minerals as Raw Materials for Nigeria's Industries, In Raw Materials, Research and Development Exhibition Pamphlet
- Nwoke, C. N. (2013) Rich Land; Poor People: The Political Economy of Mineral Resources Endowment in a Peripheral Capitalist State, 3<sup>rd</sup> Inaugural Lecture, Lead City University, Ibadan

Northouse, F. "Effective Leadership" [www.abbyssinialaw.com](http://www.abbyssinialaw.com) (accessed 13-4-2017)

Olopoenia, A. (1998) A Political Economy of Corruption and Underdevelopment, Tenth Faculty Lecture Series, Faculty of The Social Sciences, University of Ibadan

Payne, R. J. and Nassar, J. R. (2006) Politics and Culture in the Developing World, 2<sup>nd</sup> Edition, Pearson Longman, New York

Rourke, J. (1999) International Politics on the World Stage, 7<sup>th</sup> Edition, Duskin McGraw Hill, United States

Sutulov, A. (1972) Minerals in World Affairs (Salt Cake- City) The University of Utah Printing Services

Todd, J. M. (2007) African Development, Lynne Rienner Publishers, USA

Cross River State Vision 2020, 1999 and Cross River State Economic Empowerment and Development Strategy 2, 2009-2012 p14

Entrepreneurship ([www.businessday.com](http://www.businessday.com)) accessed 20-4-2017

