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What are the Social-Economic Conditions of the Ordinary Nigerian People during the oil Boom and Doom? And during Which Periods did the People and the Economy Fare Better?

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Abstract:- The article analyses data from the common domain to determine the effect of over 20 years of crude oil exploitation (1970-1990) on the Nigerian people and thus determine during which periods the people and their economy fared better. This study covers the para-agricultural, oil boom, and doom eras. Statistically, significant differences were found between the levels of human development in the different periods.

Keywords:- *Component; Formatting; Style; Styling; Insert.*

I. INTRODUCTION

Prior 1956, Nigeria was an agricultural society and produced hides and skins from the North, and groundnuts in the "Middle Belt" states. In the Western and Eastern regions; large quantities of cocoa and palm products were harvested, respectively. Oil was discovered in Olibiri, Bayelsa State, in 1956.Gradually, the country had slipped into overdependence on petrodollar from crude oil exploitation. Crude oil became the leading foreign exchange earner [1]. The dependence has resulted in destruction of land fertility and contamination of water bodies [2, 3]. The degradation of the environment in Ogoniland has become a byword for environmental pollution. Activities in the oil and petrochemical industry are among the human actions known to generate annually large amounts of contaminants, which are released into the atmosphere, soil, and natural water bodies [4]. The wonton reckless disregard for human lives is exemplified in most wetlands across the country where thousands were killed for their angst and protest against environmental degradation and pollution due to crude oil exploitation activities. Nigeria can be divided into four states or periods due to its petroleum history, namely:

A. The Agricultural State.

Prior to 1956, agriculture was the country's main source of foreign exchange. It was the mainstay of the economy, accounting for approximately 57% of the GDP and 64.5% of export earnings. In the late 1950's Nigerian society, petroleum products were insignificant accounting for less than 2% of total exports.

B. The para-Agricultural State.

The 7 years before the oil boom (which the Authors term the "para-agricultural"; because agricultural and oil extraction activities co-existed. (/*Para*/ Greek 'beside', in combination) During this time, the country transited from an agricultural society to a society increasingly dependent on earnings from oil exports.

C. *The Oil Boom.*

This was of the 1970"s, characterized by high oil prices and a country almost exclusively dependent on oil earning.

D. The Oil Doom (or the burst).

This was a decade after the boom characterized by falling oil prices and rising inflation.

In this study, the para-agricultural, the oil boom and the subsequent oil doom Nigerian eras were investigated. In the 1970s, the petroleum sector of the economy became a most cherished sector, with graduates streaming into it [5, 6]. However, it was not the leading employer of labor. The rise of Nigeria in oil geopolitics has been dramatic, from 5.1x (1,000 b/d) barrels in the 1950s to just over 600 million between the 1960s and 1973 [7]. How has this accelerated revenue affected the general population? The oil boom era was characterized by a remarkable increase in foreign exchange earnings. This led to the emergence of disorderliness [8].According to [9] the oil boom also led to the neglect of other non-oil tax revenues; however, [10] shares a contrary view and attributes the decline in agricultural export to the increasing population.

The subsequent years after the "golden decade", were the years of the economic crash. It has been termed the oil doom or "The burst" due to the lower oil prices in the 1980s. The country was unable to complete several large-scale projects as a result of the lower prices due to an almost entirely dependency on the oil sector for foreign exchange. Domestic inflation was high too.

In this paper, questions were asked and examined using common indices to consider "the standard of living of general Nigerian citizens", during these periods. This indirectly reflects on the effect of the petrodollar on the ordinary common citizenry and the host communities. With the current legislation, the Nigerian's oil wealth is vested in the Federal Government of Nigeria, and all revenue is pooled into the Federation account for distribution among the constituent

government (43%, 30%, 20%, &7 % being Federal, State, Local, and special fund respectively). An additional 13% is allocated to the "oil-producing states" to be shared basis on the volume of oil produced from each state. These states are the Niger Delta states of Abia, Akwa Ibom, Bayelsa, Cross River, Delta, Edo, Imo, Ondo, and Rivers states. To develop, a nation must possess an adequate power supply. Nigeria is blessed with a great reserve of natural gas. Indeed, Nigeria has been described as"gas providence with pockets of oil" [11]. The natural gas industry was touted as a "cure" to incessant power supply outages [12, 13] and [14]. The energy reserves of Nigeria include 34 billion barrels of oil, 5.3 trillion cubic meters of natural gas, and 639 million tons of coal, and hydro resources. Indeed it has been estimated that the oil and gas reserves would last 40 and 100 years respectively [15]. But how has this contributed to the development of the Nigerian People? The article uses data from the common domain to answer these questions. Using statistical analyses to determine the effect of the extractive industry on the general health of the country and thus determine which periods the people and their economy fared better.

II. MATERIALS, METHOD OF INVESTIGATION AND INSTRUMENTATION

A. Statement of the problem

Using statistical analysis, the GDP, HDI and other economic indices, the three broad periods of the Nigerian petroleum history were compared. With descriptive and inferential statistics, the Authors compared the health of the country and the development of the Nigerian people with the aim to determine the period the people fared better.

B. Objective of the study

The study represents 20 years (1970-1990) of Nigeria's crude oil production. The objectives of the study were:

- To compare and examine the Nigerian economy during the three major economic narratives or periods, which represents 7 years before the oil boom, when Nigeria had a predominately agricultural society transiting into a country dependent on her oil resources, during the periods of oil boom (1977-1983) and finally the oil doom (1984-1990)
- To determine the period the country recorded greatest human development.
- And to determine statistically the significant of this information.

C. Research questions and Hypothesis

The article will answer two research questions.

- What are the social-economic conditions of the ordinary Nigerian people during the years under review, using the HDI index? Is there a statistically significant difference in the HDI variation during the years under review?
- And during which periods did the people and the economy fare better?

The following hypotheses were formulated for testing:

H_0 = There are significant differences in the development of the Nigerian people during the three periods

H_1 = There are no significant differences in the development of the Nigerian people during the three periods.

D. Scope, Limitation, Validity and Significance of the study

The scope is limited to statistical analysis of data from the years 1970 to 1990 using, p=0.95 and an alpha value of 0.05 considered. The research is limited to the use of data in the public domain. This allows easy repeatability of the investigation by others Researchers. It is limited to the use of Microsoft Excel and the inbuilt Data Analysts ToolPak add-in with multiple statistical descriptive and inferential statistical tests based on the nature of the data. The validity is dependent on the integrity of available public data. The research holds great interest to policymakers and researchers of the petroleum history of Nigeria. The HDI of a country is a summary measure of human development. It is derived from the average achievements in health, education, or knowledge and the standard of living. This study helps the reader understand the effects of petroleum wealth on the general population of Nigeria, as well as their standard of living and quality of life.

E. Research methodology and Instrumentation

Secondary data were used to investigate the effect of the para-agricultural based economy and the economy based on the extraction of mineral resources (predominately hydrocarbon) on the development of the common Nigerian people.

F. The indices and values used for the study

Table 1: 1970-1990 Data for the investigation

Year	HDI	OPEC Quota, crude oil production X (1,000 b/d)	Population, total	GDP per capita ($)	value of petroleum export (m/$)	value of export, (m/$)	value of import , (m/$)
1970	0.297	1,083.1	55,569,264	225.7696	718	1249	1059
1971		1,531.2	56,837,614	161.5439	1,375	1886	1514
1972		1,815.7	58,173,834	210.9955	1,803	2184	1505
1973		2,054.3	59,605,446	254.3873	3,049	3601	1862
1974		2,255.0	61,157,931	406.2701	8,997	9684	2763

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1975	0.333	1,783.2	62,851,312	441.9786	7,744	8305	6047
1976		2,066.8	64,658,315	561.5501	9,444	10117	8217
1977		2,085.1	66,589,655	541.1562	11,561	12367	11006
1978		1,897.0	68,633,344	532.2174	9,452	10445	12929
1979		2,302.0	70,750,307	667.9817	15,624	16733	12398
1980	0.377	2,058.0	72,951,439	880.062	24,931	25934	16643
1981		1,439.6	75,175,387	2187.8864	17,291	17837	21049
1982		1,287.0	77,388,067	1844.8498	11,883	12176	15999
1983		1,235.5	79,351,586	1223.6039	9,941	10363	12307
1984	0.384	1,388.0	81,337,553	903.4494	11,634	11849	9393
1985	0.381	1,498.9	83,585,251	882.2827	12,568	13111	8890
1986		1,466.8	85,804,185	638.7317	4,770	5083	4274
1987		1,323.0	88,044,187	598.291	7,024	7560	2265
1988		1,340.0	90,351,467	549.5038	6,267	6877	5533
1989		1,716.3	92,744,064	474.4569	7,470	7844	4187
1990	0.394	1,726.7	95,214,257	567.5179	13,265	13673	5627

Courtesy: www.opec.org , https://population.un.org/wpp/ , www.macrotrends.net

The indices and values used for comparison are shown in Table 1; namely:

- The HDI (human development index). This assesses progress in human development by taking into account average achievement in key areas such as mean years of schooling, expected year of schooling, life expectancy at birth, and gross national income. Thus, the HDI takes into account three indicators of human development: life expectancy, education, and per capita income. It is a composite indicator that measures average accomplishment in fundamental elements of human development: longevity and health, knowledge, and a reasonable quality of living. According to Ogwola et al (2021), [15] the low HDI in Nigeria, can be attributed to poor social infrastructure, high income inequality, oil dependence, level of corruption, political unrest and prevalent disease among the youth
- The GDP (Gross Domestic Product) per capita $. The GDP measures the value added created through the production of goods and services. It can be measured using expenditures, production, or incomes. Primarily it assesses the health of a country's economy. In this study the GDP (Gross Domestic Product) per capita $ was used (Table 1)
- The value of petroleum export (m/ $) as a fraction of the total export. This determines the proportion of total export that accrued from petroleum / petroleum products, and hence, the dominate foreign exchange earner at each period.

This was determined as:
Dy =PEy/Ey (1)
Where:
Dy= dominate foreign exchange earner
PEy= value of petroleum export (m/$)
Ey= value of exports (M/$)
And, y = year

Using equation (1), the dominate foreign exchange earner at each period were determined and arbitrarily assigned as:

Dy>0.5; unhealthy and Dy<0.5; healthy

And, when Dy=0.5; this is considered precarious as a slight shift can produce an unhealthy export pattern. It is considered a mono-economy and unhealthy when one single item (Hydrocarbon) accounts for the majority of export earnings.

- And dominate purchasing / consumption pattern at each period. The purchasing/consumption pattern is a measure of the general trend, toward imported or domestic products. This was arbitrarily calculated as the ratio of export to import. It takes two states: “import-centric” whereby imported goods were greatly favored or “local-centric where domestically products were greatly desired.

The export/import ratio, EI= Ey/Iy (2)
Where:
EI=purchasing / consumption pattern
Ey=value of exports (m/$)
Iy = Value of imports (m/$)
And, y = year

As the export is the numerator and import denominator; the lager the export relative to the import; the healthier the economy import. A value of unity (1) is considered precarious. The data were grouped into three broad groups based on the date; 1970 to 1976, 1977 to 1983 and 1984 to 1990.

G. Research design and population

Aggregate data were sourced and collected. Descriptive statistics was used to achieve objectives (i and ii). The one-way analysis of variance was used to achieve objective (iii). The populations for the periods under review are as shown in Table1.

H. Research Assumptions made in the study

Crude oil production and sale was as determined from the OPEC Annual Statistical Bulletin. This was assumed to be the actual crude oil production. It shall be assumed that neither overproduction nor under-production occurred. All other data were assumed to be authentic and accurate as reputable organizations were used.

III. RESULTS AND DISCUSSION

Table 2. Determination of Dy and El

Time (years)	Periods	Average HDI	Dy	EI
1970-1976	Para-Agricultural	0.315	0.8948	1.612139156
1977-1983	Oil Boom	0.381	0.9511	1.034437267
1984-1990	Oil Doom	0.388	0.9546	1.642983395

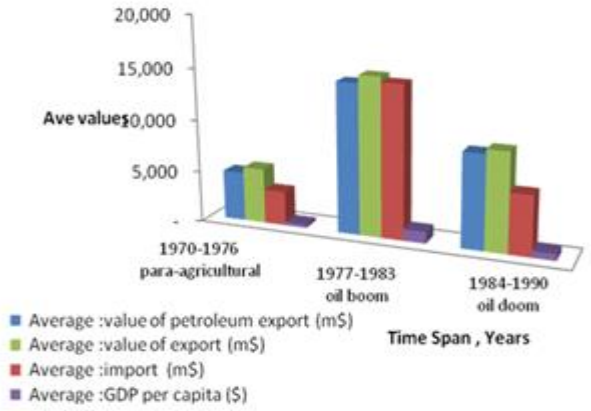

Fig. 1. Values of key indicators.

Objective I - Comparative examination of the years under review, categorized into the three periods- Para-agricultural, oil boom and oil doom. Figure 1 shows the average values of petroleum export, average yearly imports, exports and the average GDP per capita for the years under review. As early as seven years before the 1970 oil boom, the ratio of petroleum export/total export was toward reliance on petroleum export for foreign reserve generation. This is not healthful, and it has been aggravated by the high level of importation. The trade balance was lopsided in favor of imports, as indicated in Figure 1 and Table 3. Although it was unhealthy throughout the para-agricultural period, it deteriorated steadily, as seen in Table 2.

Objective II – To determine within the years under review (categorized by periods) wherein the Nigerian people fared the best conditions using the HDI as indicator. Observation of the HDI showed that it was higher during the oil doom periods than at any other period under review. This may be explained by considering that although during the oil boom more foreign exchange were earned by the country, the wealth did not trickle down to all the masses. There was an inequitable distribution of the wealth and gains from the oil boom; which led to greater chaos and the emergence of a pseudo-class affluent from petroleum transactions and trading. This nouveau riche class existed in proximity with the middleclass and the destitute and abject impoverished classes. According to the data (Figure 2), the oil doom years were the best time for the Nigerian people. Perhaps, with a reduction of cash inflow, available resources were more judiciously spent.

Objective III- To determine the significant of this information, a single factor –ANOVA was done (Table 3). From Table 4, the ANOVA single factor test shows:

- The mean square (MS) between groups is greater than the (MS) within groups, implies that the variations between groups is greater than the variations within groups.
- The F-value is greater than *F crit*, hence, there is statistical significant difference.
- The hypothesis is acceptable and we fail to reject the null hypothesis. There is statistically significance difference between the level of development in the different periods (para-agricultural, oil boom and oil doom).

Table 3. ANOVA

Source of Variation	SS	df	MS	F	P-value	*F crit*
Between Groups	0.006397	2	0.003199	12.67569	0.034421	9.552094
Within Groups	0.000757	3	0.000252			
Total	0.007154	5				

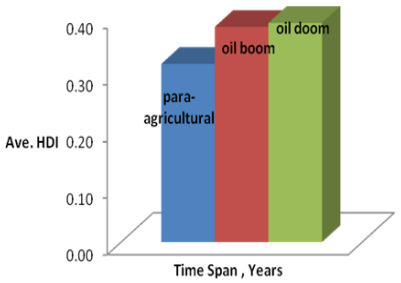

Fig. 2.The comparative examination of the HDI indices for periods**.**

IV. CONCLUSION

In this paper Nigeria was categorized into four eras to statistically find determine the effect of the crude oil on the development of the ordinary common Nigerian citizen? The study uses historical data and considered values of the import, export, petroleum exports, and the HDI for the years under review in Nigeria. The empirical findings of the study indicate significant differences in the quality of life during the oil doom compared to the para-agricultural and oil boom eras. Surprisingly the oil doom years has the highest human development. It can be summarized that the country and its people fared better with a more organized environment even with lower revenue due to dwindling petrodollars.

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- The HDI data from the www.undp.org website.
- The World Bank (2020a) World Development Indicators database, http://data.worldbank.org.
- The 2019 Data on Nigeria GDP Per Capita 1960-2023 from www.macrotrends.net

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