Empirical Comparison of Output of Petroleum Products of African Oil Producing Countries with OPEC in the 21st Century

Bailey Saleh
Department of Political Science, University of Maiduguri,
PMB 1069, Maiduguri, Borno State, Nigeria.
Postcode - 600004
salehbailey2016@gmail.com.
08039104266

Abstract

African oil producing countries have exploited crude oil which they exported to serve as their major foreign revenue in the last seventy years. These categories of African countries have failed to leverage on this to domestically, process their crude oil into outputs of petroleum products to meet with the increase in the local consumption needs their citizens. Paradoxically, it is non-oil producing countries of the continent like Sought Africa and Egypt that are leading in the processing of crude oil into petroleum products output. Whereas, virtually all the African oil producing countries are major importers of petroleum products from foreign countries that are buyers of their crude oil. It is because of this inability of African countries to take advantage of their membership of OPEC to leverage on the processing of their crude oil into massive outputs of petroleum products to meet up with the continent's local consumption needs and generate more employment and empower greater numbers of our citizens that forms the motivation for this study. The study adopted qualitative method and data generated through secondary sources such as academic journals, bulletins, textbooks, scholarly papers, and internet materials. Data was analyzed through descriptive and explanatory method. Conclusion can be drawn African oil producing countries underperformed in the area of output of petroleum products compared to OPEC for the period of the study.

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1. Introduction

African oil producing countries and indeed the entire African continent for the past six decades have been complacently living under petroleum oil-induced wealth and luxury that have propelled them into prominence in global politics and economy; but have unfortunately remained under economic servitude of western buyers of their crude oil. More specifically, the discovery of crude oil in Nigeria and Libya has also catapulted them into the positions of the leading African spokespersons and as voices to reckon with at international fora (forums) more especially under regimes of Nigerian military leaders and under Late Col. Mouamar Gaddafi of Libya. With natural endowment of vast arrays of natural and human resources; Africa can lead OPEC and other continents (regions) of the world economically, industrially, technological and scientifically. This is attainable if it can rely heavily on local strategic thinking to process all its crude oil and use the proceeds to grow her manufacturing sub-sector, which is the current vogue in international politics and economy. This will no doubt improve Africa's world economic rankings to top 2 by 2050 where it is expected to outperformed the entire West and reluctantly placed 2nd behind Asia & Pacific (Saleh, 2019; NPP, 2017).

Refining activities on the African continent took place at the same time with the extraction of crude oil; and at the same point of oil producing African countries joining the Organization of Petroleum Exporting Countries (OPEC). Prominent among African countries that are engaged in refining of crude oil and processing of petroleum products are: Algeria, Angola, Egypt, South Africa, Gabon, Libya and Nigeria. In spite of the fact that South Africa is not among the major African oil producing countries; its performance in this regard is quite commendable. However, sub-optimal performances have been recorded for major African oil producing countries like Nigeria and Libya with moribund refineries due to poor leadership qualities in these countries. The inept and fraud leaders that ruled and are still ruling these oil-endowed African countries, who deliberately dysfunction most of these refineries gain tremendously from illicit oil deals such as export of crude oil and import of refined oil and petroleum products (Saleh, 2019; LCCI, 2016).

The neglect of the refining sections and processing of petroleum products of their petroleum industries has deprived millions of their citizens of employment/job opportunities and economic empowerment. These deliberate leadership failures by failed African leaders have created a massive disequilibrium for the domestic economy and a very serious imbalance in their national security architecture. It is this failure on the part of African political leaderships to efficiently refine and process all their crude oil; that form the motivation for the study.

The major aim of the study is to make comparison of output of petroleum products of African oil producing countries with the Organization of Petroleum Exporting Countries (OPEC) in the 21st Century. In addition, it is to determine the extent to which, Africa has exploited the benefit of the processing of its crude oil into outputs through massive employment generation and economic empowerment in the 21st Century.

2.Methodology

The study adopted qualitative method and data generated through secondary sources for the study. The research, which is an empirical comparison of the performances of African oil producing countries with the Organization of Petroleum Exporting Countries in the 21st Century, is essentially descriptive and explanatory. The secondary source of data collection was the one adopted and utilized in generating data for the study through document studies. Relevant documents on Nigeria's Petroleum Policy NNPC and OPEC were scrutinized. Documents scrutinized include official documents such as annual reports/bulletins, internal memoranda and policy manuals. Other documents included published materials such as textbooks, academic journals, scholarly papers, and internet materials.

Comparative Administration Theory –

Herbert Simon (1957) who came up with normative approach was the first to popularize the comparative administration and government theory. He also came up with empirical approach aimed at making comparative analysis of administrations towards establishing whether they are performing efficiently or not. If otherwise, the areas of convergence and divergence among them should be sorted out and appropriate strategies adopted towards making them perform more efficiently. Other exponents and advocates of comparative government and administration (politics) theory include Gabriel Almond (1988), Betarlanfy (1969), Billy J. Dudley, (1973, 1982) and Christopher Kolade (2000). These scholars placed emphasis on the political and administrative institutions, governance style and the rate of development. The comparison could either be inter-state (i.e. comparing the governance style or system between one country or the other), or intra-state (i.e. the comparative study of one regime/administration and the other within the same country). The focus of this study is to analyze and compare Africa's petroleum product outputs with OPEC in the Fourth Republic.

3. Results and Discussion

Results of both empirical and qualitative data generated from secondary sources are hereby presented in Tabular and graphical forms and analyzed through critical discussed method below:

Output of Petroleum Products of African Oil Producing Countries Compared with OPEC, 2012-2019

The output of petroleum products of African countries compared with OPEC indicates that the performance of the entire African continent stands at 17,669.2b/cyr, which is far less than the performance of Saudi Arabia as an individual country with 17,885.5b/cyr. In the same vein, the performance of non-OPEC African countries with 10,992.4b/cyr surpasses that of African OPEC member countries with 6,676.8b/cyr. Iran is in the second position with 14,748.0b/cyr. Another high performer is Venezuela with 9,080.8b/cyr. Others are Kuwait with 7,840.0b/cyr, UAE with 6,122.4b/cyr, Qatar with 5,104.8b/cyr, Algeria with 4,581.6b/cyr, Iraq with 4,156.8b/cyr, Ecuador with 1,508.8b/cyr, Libya with 1,118.4b/cyr, Nigeria with 488.8b/cyr, Angola with 359.2b/cyr and Gabon with 128.8b/cyr. The sub-optimal performances of African OPEC member countries in terms of the processing of crude oil into petroleum products is a matter of

great concern to African citizens because it has deprived them of millions of job opportunities and economic empowerment. If African countries can leverage on the output of petroleum products, it will go a long way to increase the level of production processes on the continent with a deliberate spillover into aggressive local manufacturing and industrialization in their domestic economies. This will bring about a turnaround of Africa's economic fortune that will go a long way to keep our teeming youths away from embarking on hazardous illegal migration to Europe and North America and to some extent China. When the African youths are actively engaged in these oil and gas processing refineries and factories, they will find little importance attached to unnecessary migration to foreign countries since what they are looking for in foreign countries is already in their courtyards (Ejiba & Omolade, 2016; OPEC Bulletin, 2017/2018).

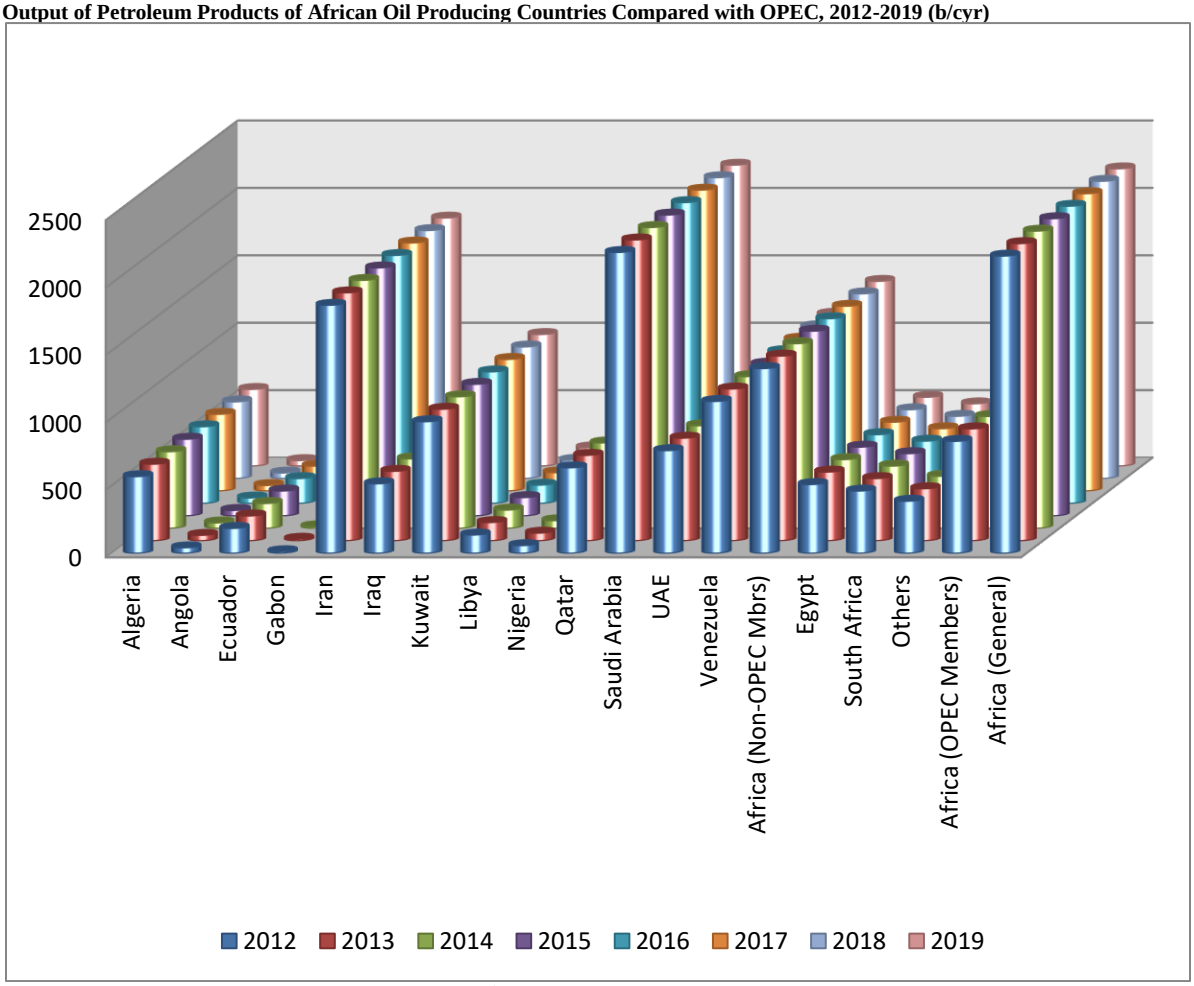
The individual performances of Africa and other OPEC member countries are as presented in Table 1 and Figure 1 below:

Table 1: Output of Petroleum Products of African Oil Producing Countries Compared with OPEC, 2012-2019 (b/cyr)

S/N	Countries	2012	2013	2014	2015	2016	2017	2018	2019	Cumulative
1.	Algeria	572.7	572.7	572.7	572.7	572.7	572.7	572.7	572.7	4,581.6
2.	Angola	44.9	44.9	44.9	44.9	44.9	44.9	44.9	44.9	359.2
3.	Ecuador	188.6	188.6	188.6	188.6	188.6	188.6	188.6	188.6	1,508.8
4.	Gabon	16.1	16.1	16.1	16.1	16.1	16.1	16.1	16.1	128.8
5.	Iran	1,843.5	1,843.5	1,843.5	1,843.5	1,843.5	1,843.5	1,843.5	1,843.5	14,748.0
6.	Iraq	519.6	519.6	519.6	519.6	519.6	519.6	519.6	519.6	4,156.8
7.	Kuwait	980.0	980.0	980.0	980.0	980.0	980.0	980.0	980.0	7,840.0
8.	Libya	139.8	139.8	139.8	139.8	139.8	139.8	139.8	139.8	1,118.4
9.	Nigeria	61.1	61.1	61.1	61.1	61.1	61.1	61.1	61.1	488.8
10.	Qatar	638.1	638.1	638.1	638.1	638.1	638.1	638.1	638.1	5,104.8
11.	S/Arabia	2,235.7	2,235.7	2,235.7	2,235.7	2,235.7	2,235.7	2,235.7	2,235.7	17,885.6
12.	UAE	765.3	765.3	765.3	765.3	765.3	765.3	765.3	765.3	6,122.4
13.	Venezuela	1,130.1	1,130.1	1,130.1	1,130.1	1,130.1	1,130.1	1,130.1	1,130.1	9,040.8
	OPEC Total	**9,135.5**	**9,135.5**	**9,135.5**	**9,135.5**	**9,135.5**	**9,135.5**	**9,135.5**	**9,135.5**	**73,092.0**
14.	Egypt	514.2	514.2	514.2	514.2	514.2	514.2	514.2	514.2	4,113.6
15.	South Africa	465.9	465.9	465.9	465.9	465.9	465.9	465.9	465.9	3,757.2
16.	Others	390.2	390.2	390.2	390.2	390.2	390.2	390.2	390.2	3,121.6
	Africa (Non-OPEC)	1374.05	1374.05	1374.05	1374.05	1374.05	1374.05	1374.05	1374.05	10,992.4
	Africa (OPEC)	834.6	834.6	834.6	834.6	834.6	834.6	834.6	834.6	6,676.8
	Africa General	2,208.7	2,208.7	2,208.7	2,208.7	2,208.7	2,208.7	2,208.7	2,208.7	17,669.2
	OPEC plus Africa	**11,344.2**	**11,344.2**	**11,344.2**	**11,344.2**	**11,344.2**	**11,344.2**	**11,344.2**	**11,344.2**	**90,753.6**
	World Total	**87,684.8**	**87,684.8**	**87,684.8**	**87,684.8**	**87,684.8**	**87,684.8**	**87,684.8**	**87,684.8**	**701,478.4**

Source: Generated by the Researcher in 2025 as adapted from OPEC Bulletin, 2017/2018

Fig. 1:
Output of Petroleum Products of African Oil Producing Countries Compared with OPEC, 2012-2019 (b/cyr)



Source: Generated by the Researcher in 2025 as adapted from OPEC Bulletin, 2017/2018

Summary of the cumulative output of petroleum products of African oil producing countries compared with OPEC shows that the total cumulative for the entire African continent stands at 17,669.2b/cyr representing 19% of the total cumulative of OPEC plus Africa (90,753.6b/cyr). The total cumulative of African OPEC member countries stands at 6,676.8b/cyr (7%) indicates a serious underperformance. While the total cumulative of African countries that does not belong to OPEC which stands at 10,992.4b/cyr representing 12% of the total cumulative of OPEC plus Africa; has surpassed the performance of the African countries that are members of OPEC. The total cumulative of OPEC for the period 2012 and 2019; stands at 73,092.0 representing 81% of OPEC plus Africa. The cumulative average is 22,688.3b/cyr; and the cumulative annual average is 11,344.2b/cyr (LCCI,2016; Saleh, 2019).

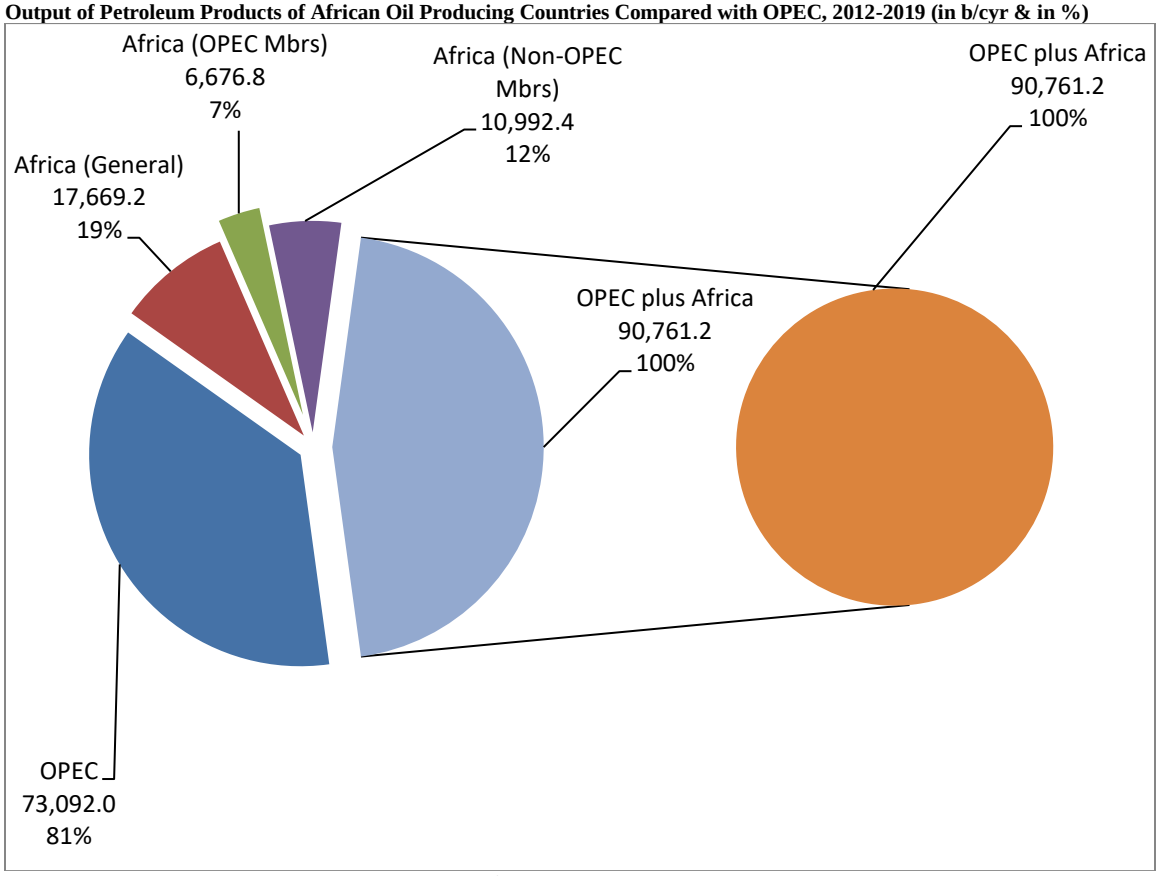
This is as presented in Table 1 and Figure 2 below:

Table 2: Cumulative Output of Petroleum Products of African Oil Producing Countries Compared with OPEC, 2012-2019 (in b/cyr & in %)

S/No.	Countries/Region	Cumulative	CA	ICA	CA A	Percentage
1.	Africa (General)	17,669.2	22,688.3	2,208.7	11,344.2	19%
2.	Africa (OPEC Members)	6,676.8	22,688.3	834.6	11,344.2	7%
3.	Africa (Non-OPEC Members)	10,992.4	22,688.3	1,374.1	11,344.2	12%
4.	OPEC	73,092.0	22,688.3	9,136.5	11,344.2	81%
5.	OPEC plus Africa	90,753.2	90,753.2	13,553.9	45,376.8	100%

Source: Generated by the Researcher in 2025 as adapted from OPEC Annual Bulletin of 2017/2018

Fig. 2:
Output of Petroleum Products of African Oil Producing Countries Compared with OPEC, 2012-2019 (in b/cyr & in %)



Source: Generated by the Researcher in 2025 as adapted from OPEC Bulletin, 2017/2018

The comparison of output of petroleum products of African countries with two other regions of OPEC shows the Middle East leading with a towering performance of 55,865.6b/cyr representing 70% of the OPEC's total cumulative of 73,092.0b/cyr for the period 2012 and 2019. This is followed by Latin America with 10,549.6b/cyr representing 14% of OPEC's total cumulative for the same period. The African region is the least performer with 6,676.8b/cyr representing 9%. The regional average stands at 24,364.0b/cyr; and the cumulative annual average is 9,136.5b/cyr. The performance of Africa, which falls below both the regional average and the cumulative annual average, is quite worrisome because the processing of these petroleum products is usually associated with high volumes of activities in terms of jobs and economic empowerment. As such, the more of these processing activities in the petroleum industry

of any national economy, the better it is for the citizens and the country (Adeola & Ogunmoki, 2015; NPP, 2017; Olapade, et-al, 2019).

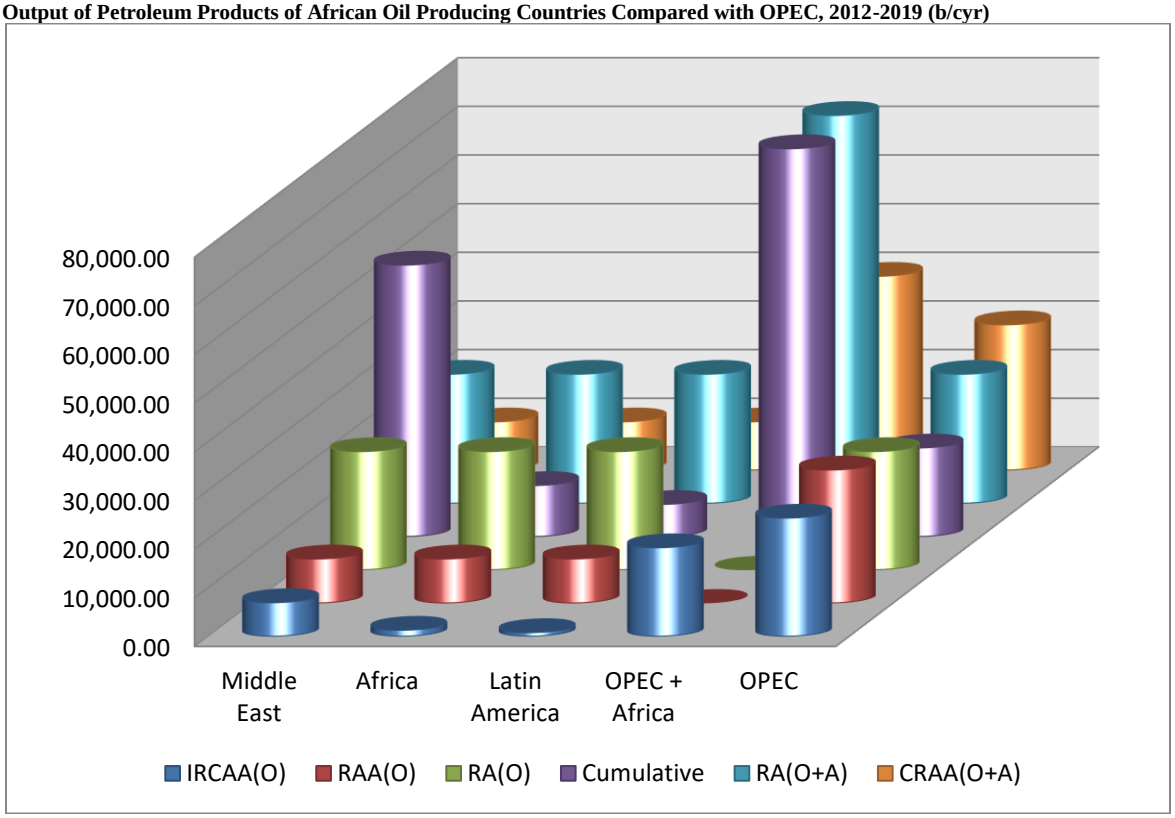
This is as presented in Table 3 and Figures 3 & 4 below:

Table 3: Cumulative Output of Petroleum Products of African OPEC Member Countries Compared with two other Regions of OPEC, 2012-2019 (in b/cyr & in %)

S/N	Countries/ Region	Cumulative	RA(O)	ICA(O)	CAA(O)	RA (OPEC + Africa)	CRAA (OPEC +Africa)	% OPEC	% OPEC+ Africa
1.	Africa	6,676.8	24,364.0	834.6	9,136.5	26,589.6	9,971.1	9%	8%
2.	Latin America	10,549.6	24,364.0	1,318.7	9,136.5	26,589.6	9,971.1	14%	13%
3.	Middle East	55,865.6	24,364.0	6,983.2	9,136.5	26,589.6	9,971.1	77%	71%
4.	OPEC	73,092.0	0	9,136.5	27,409.5	0	9,971.1	100%	92%
5.	OPEC + Africa	79,768.8	73,092.0	18,273.0	54,819.0	79,768.8	39,884.4	0	100%

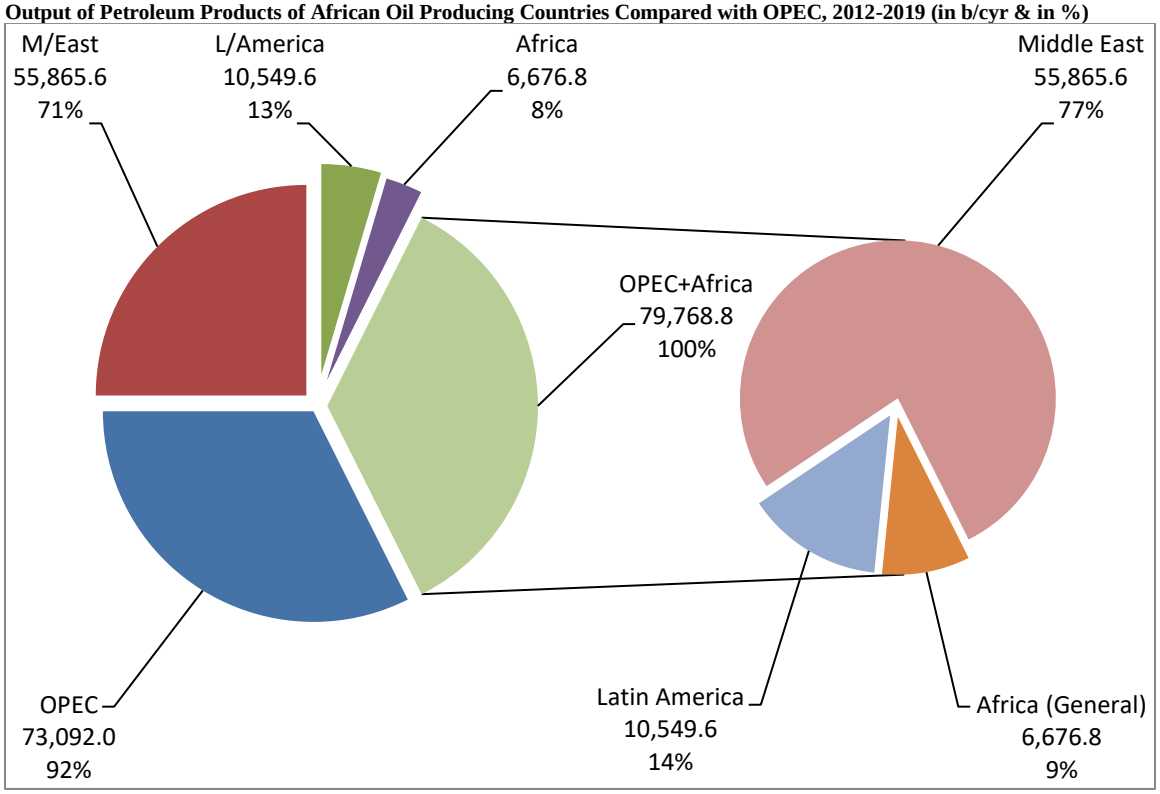
Source: Generated by the Researcher in 2025 as adapted from OPEC Annual Bulletin of 2017/2018

Fig. 3:
Output of Petroleum Products of African Oil Producing Countries Compared with OPEC, 2012-2019 (b/cyr)



Source: Generated by the Researcher in 2025 as adapted from OPEC Bulletin, 2017/2018

Fig 4:
Output of Petroleum Products of African Oil Producing Countries Compared with OPEC, 2012-2019 (in b/cyr & in %)



Source: Generated by the Researcher in 2025 as adapted from OPEC Bulletin, 2017/2018

4.Conclusion/Recommendations

From the analysis so far, conclusion can be drawn that Africa oil producing countries have been the underperformers among other OPEC regions in terms of the processing of crude oil into output of petroleum products. This sector in addition to others, will contribute towards flattening the curves of unemployment and poverty in their countries. It will in addition create national wealth as well as stabilize the national security equilibrium of countries with functional refineries and petro-chemical industries. The study has established that Africa is the least performer among the three regions in terms of output of petroleum products, with total cumulative of 6,676.8b/cyr representing 9% of OPEC total of 73,092.0b/cyr (100%); Latin America 10,549.6b/cyr (14%) and Middle East 55,865.6b/cyr (70%). In comparison with OPEC, Africa has also recorded sub-optimal performance in terms of output of petroleum products, where the continent produced 17,669.2b/cyr representing 24% of OPEC's total cumulative of 73,092.0b/cyr for the period covered by the study. It also represents 19% of the total cumulative of OPEC plus Africa, which stands at 90,753.2b/cyr. The implication of this sub-optimal performance of African oil producing countries in terms of processing of crude oil into finished output of petroleum products; is that the continent will continue to export jobs and wealth to processing countries of Europe, North America and China, as long as it continued to export crude oil. This self-inflicted asymmetrical and dialectical relationship portend great dangers for African oil producing countries and other OPEC

members since they have no singe alternative to oil in the near future. Without viable alternative energy and without strategic processed and refined oil reserves, the economy of Africa can be grounded in the event of unpalatable contingencies of war, global disease pandemic (as was the case with COVID-19); and dwindling oil fortune in the international oil market.

By way of recommendations, African countries should as a matter of urgency embark on the exclusive refining and processing of crude oil of their individual countries' oil industries so as to step-up the processing of huge volumes of output of petroleum products that would be sold for more foreign revenues. This enhanced self-contained status, will further generate millions of jobs and wealth for African citizens. Africa should leverage on local strategic thinking to direct the proceeds to grow her manufacturing sub-sector, which is one of the strongest pillars for Africa to wriggle itself out of economic dependency.

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