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Industrialization and Economic Development in Nigeria 1981-2016

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Abstract**—***This paper investigated the impact of industrialization on the economic growth and development of Nigeria. Secondary data from CBN statistical bulletin covering 1981-2016 of various issues were used; OLS method of regression analysis was used, the findings shows that industrialization still exerts positive impact on RGDP. It was also found that industrial sector output has a positive but insignificant impact on unemployment. The result of Johensen cointegration test shows that the trace test indicated one cointegrating equation at 5% level, we therefore reject the null hypothesis and accept the alternative hypothesis that there is long run relationship between industrialization and real GDP growth. It is therefore recommended among others that, the industrial sector should be revamped to encourage global competitiveness.*

Keywords**—** *Industrialization, Economic Growth, Development*.

I. INTRODUCTION

Industrialization is regarded as a veritable tool of economic Development, in fact it is an antidote of poverty and the most reliable means of raising a country's standard of living, therefore it is a central part of government policy decision making and implementation.

Over the years, government has implemented various policies geared towards industrializing the country. Among such policies were (i) the Import Substitution industrialization (ISI), this strategy was inward looking, domestic production of manufactured goods that were hitherto imported were promoted. (ii) Export Promotion Industrialization. From the first development plan (1962-1968) to the fourth national plan (1981-1985) rapid industrialization received priority in Nigeria development objectives, in the third national development plan 1975-1980, 16.2% of the budget was allocated to the manufacturing sector, there was also increased participation in foreign own enterprises. Structural adjustment programme was introduced in 1987 to allow market forces determine the foreign exchange rate, remove price distortions and thereby effect a more efficient allocation of resources all in the pursuit of encouraging the industrial sector.

The vision 2020 inaugurated by president Umaru Musa yar Adua, Trasformation agenda by Goodluck Jonathan, and Economic Recovery and Growth Plan (ERGP) by President Mohammadu Buhari, which entails export promotion plan, the current administration also inaugurated the Nigeria Industrial policy and Competitiveness Advisory Council on may 30th 2017, the term of reference include to increase the contribution of manufacturing sector to GDP by 250% over five years, to make Nigeria a manufacturing hub in West Africa, to diversify the economy from its over dependence on oil etc.

Statement of Problem

With all the development plans geared towards improving the industrial sector, we still have more than 40% of Nigerian population living below poverty line; there is high unemployment and poor standard of living. The problem of this research therefore is to find out if industrialization still impacts positively on the country's growth and development as proxy by GDP.

Objectives of the Study

The broad objective of this research is to critically access the role of industrialization in economic development of Nigeria.

Whereas the specific objectives are to:

1. access the impact of industrial sector output on GDP
2. access the impact of industrialization on reduction of unemployment rate in Nigeria

Research Questions

In line with the aforementioned objectives, the following questions will guide this research work:

1. To what extent has industrialization contributed to GDP in Nigeria?
2. Has industrialization impacted on the rate of unemployment in Nigeria?

Research Hypothesis

H01: There is no significant relationship between industrialization and economic growth of Nigeria.

H02: Industrialization has no significant impact on unemployment in Nigeria.

II. LITERATURE REVIEW

The process of achieving economic development involves a number of approaches. One of these is the adoption of an industrialization strategy relevant to the prevailing needs of development. (Onwumere & Igwemma, (2010).

One of the theories of industrialization is the "big push" by Rosenstein Roden. This theory proposes a large scale investment in order to overcome the depressing effect of large population growth or other countervailing forces that keep the under developed economies in a state of static equilibrium trip. This large scale investment can only be possible in the area of industrial development.

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Emperical Literature

Bennett, Anyanwu and Kalu (2015), empirically analyzed the effect of industrial development on the economic growth of Nigeria using OLS method of regression analysis, it was confirmed that, there exists a positive but insignificant relationship between industrial development index and GDP.

Aliga and Odoh (2016) study the impact of industrialization on Nigeria's economy using Johansen co integration test discovered a significant long run relationship between the output of the industrial sector and RGDP.

Anyaogu (2014) examines the effect of corporate tax on the performance of the industrial sector, using OLS method of data analysis, found a significant relationship between corporate tax and industrial sector performance.

Alao R.O (2010) investigated the macro economic factors affecting the performance of the manufacturing sector in Nigeria using Error Correction Model (ECM) found that environment is one of the factors affecting productivity in Nigeria.

III. Model Specification

RGDP=f(Industrial sector output)……3.1
Unemployment= f (Industrial sector output)……3.2
RGDP=ao+a1INDQ +e……..3.3
UNEMP=bo +b1 INDQ+e ……..3.4
Where
RGDP =Real Gross Domestic Product
UNEMPL =Unemployment rate
Apriori Expectation
It is expected based on empherical investigation that a1≥0
Industrial output a1 is expected to have a positive impact on RGDP
b1≤ 0
Industrial production is expected to have a negative impact on unemployment rate.

IV. Ordinary Least Square Result

Dependent Variable: RGDP				
Method: Least Squares				
Date: 11/07/18 Time: 15:09				
Sample: 1981 2016				
Included observations: 36				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
INDOPT	6.871787	0.402554	17.07047	0.0000
UNEMP	1567.566	621.5208	2.522145	0.0167
C	-42162.73	5748.109	-7.335060	0.0000
R-squared	0.898680	Mean dependent var		31757.15
Adjusted R-squared	0.892539	S.D. dependent var		18151.71
S.E. of regression	5950.358	Akaike info criterion		20.29995
Sum squared resid	1.17E+09	Schwarz criterion		20.43191
Log likelihood	-362.3990	Hannan-Quinn criter.		20.34600
F-statistic	146.3498	Durbin-Watson stat		0.439617
Prob(F-statistic)	0.000000			

The regression equation is RGDP =6.871787 +1567.57 - 42162.73.

The result shows that industrial sector output exerts a positive and significant impact on RGDP, whereas it exerts a positive but insignificant impact on unemployment.

V. Discurssion of Findings

The result shows that industrial output has a positive and significant impact on RGDP, this meet the aprori expectation, industrial output has a positive but insignificant impact on unemployment, perhaps due to the insufficient level of industrialization in the country. This corroborate the theory of Rosenstein Rodan, which says that investment must be high enough to yield the required developmental results on other sector of an economy.

From the OLS result, it was found that R-square was 90%, this means 90% of the dependent variable could be explained by the independent variable, while the remaining 10% can be explained by the error term. It means therefore that a 1% increase in industrial output will cause RGDP to rise by 89%, one should also have it in mind that as output increases demand for labour increases and unemployment reduces.

VI. Conclusion

Real Gross Domestic Product is used as a proxyl for economic growth, because RGDP determines the economic welfare of the citizenry. Increased industrial output is expected to increase RGDP and reduce unemployment.

This research work has been able to re affirm the positive impact of industrialization to the Real Gross Domestic Product of the country.

VII. Recommendation

1 Federal government should invest heavily in industrialization in order to achieve a far reaching effect on unemployment.
2 The industrial sector should be revamped to encourage global competitiveness
3 The Agricultural sector should be developed in order to provide raw materials for the agro- based industries.
4 Domestic capital should be made available for the private industrialists for new investments and to expand the existing ones.
5 There should be massive infrastructural development, that will aid the production and distribution of goods and services.

References

[1] Aliya Z. Isiksal and Odoh John Chimezie, "Impact of industrialization in Nigeria," *European Scientific Journal*, vol. 12, no. 10, pp. 328-339, 2016.
[2] R. O. Alao, "Productivity in the Nigerian manufacturing sub-sector: An Error Correction Model [ECM]," *European Journal of Economics, Finance And Administrative Sciences*, ISSN 1450-2275, Issue 20, 2010.
[3] B. K. Obioma, Anyanwu Uchenna N, and Kalu Alexanda O.U., "The effect of industrial development on economic growth (An evidence in Nigeria 1973-2013)," *European Journal of Business and Social Sciences*, vol. 4, no. 02, pp. 127-140, 2015.
[4] Onwumere, J.U.J & Igwemma, A.A ''Industrialization development'' in Economic Development and Management 2010 Quarter press LTD Enugu.
[5] P. N. Rosentein Rodan, "Problems of industrialization of Eastern and South Eastern Europe," *Economic Journal*, vol. 53, issue 210/211, pp. 202-211, 1943.

APPENDIX

Date: 11/07/18 Time: 15:16				
Sample (adjusted): 1983 2016				
Included observations: 34 after adjustments				
Trend assumption: Linear deterministic trend				
Series: RGDP INDOPT UNEMP				
Lags interval (in first differences): 1 to 1				
Unrestricted Cointegration Rank Test (Trace)				
Hypothesized No. of CE(s)		Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *		0.502606	38.40729	29.79707	0.0040
At most 1		0.336163	14.66262	15.49471	0.0665
At most 2		0.021305	0.732182	3.841466	0.3922
Trace test indicates 1 cointegratingeqn(s) at the 0.05 level					
* denotes rejection of the hypothesis at the 0.05 level					
**MacKinnon-Haug-Michelis (1999) p-values					
Unrestricted Cointegration Rank Test (Maximum Eigenvalue)					

Unrestricted Cointegrating Coefficients (normalized by b'*S11*b=I):

RGDP	INDOPT	UNEMP	
-4.91E-05	0.000974	0.445280	
5.84E-05	5.43E-05	-0.641718	
0.000248	-0.001465	-0.320744	
Unrestricted Adjustment Coefficients (alpha):			
D(RGDP)	-67.60833	44.05095	-144.2712
D(INDOPT)	-283.2385	-196.4060	-41.49863
D(UNEMP)	-0.335557	0.394427	-0.006231
1 Cointegrating Equation(s):		Log likelihood	-572.7849
Normalized cointegrating coefficients (standard error in parentheses)			
RGDP	INDOPT	UNEMP	
1.000000	-19.83059 (2.97551)	-9068.730 (2456.91)	
Adjustment coefficients (standard error in parentheses)			
D(RGDP)	0.003320 (0.00906)		
D(INDOPT)	0.013907 (0.00478)		
D(UNEMP)	1.65E-05 (6.9E-06)		
2 Cointegrating Equation(s):		Log likelihood	-565.8197
Normalized cointegrating coefficients (standard error in parentheses)			
RGDP	INDOPT	UNEMP	
1.000000	0.000000	-10894.07 (2783.52)	
0.000000	1.000000	-92.04650 (183.413)	
Adjustment coefficients (standard error in parentheses)			
D(RGDP)	0.005894 (0.01407)	-0.063438 (0.17976)	
D(INDOPT)	0.002428 (0.00689)	-0.286452 (0.08805)	
D(UNEMP)	3.95E-05 (9.2E-06)	-0.000305 (0.00012)	

Null Hypothesis: D(INDOPT) has a unit root				
Exogenous: Constant				
Lag Length: 0 (Automatic - based on SIC, maxlag=1)				
			t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic			-4.752072	0.0005
Test critical values:	1% level		-3.639407	
	5% level		-2.951125	
	10% level		-2.614300	

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*MacKinnon (1996) one-sided p-values.				
Augmented Dickey-Fuller Test Equation				
Dependent Variable: D(INDOPT,2)				
Method: Least Squares				
Date: 11/07/18 Time: 15:11				
Sample (adjusted): 1983 2016				
Included observations: 34 after adjustments				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(INDOPT(-1))	-0.904833	0.190408	-4.752072	0.0000
C	151.4733	113.2774	1.337190	0.1906
R-squared	0.413728	Mean dependent var		-27.25471
Adjusted R-squared	0.395407	S.D. dependent var		801.2866
S.E. of regression	623.0450	Akaike info criterion		15.76414
Sum squared resid	12421921	Schwarz criterion		15.85392
Log likelihood	-265.9903	Hannan-Quinn criter.		15.79476
F-statistic	22.58219	Durbin-Watson stat		1.801106
Prob(F-statistic)	0.000041			

Null Hypothesis: D(RGDP) has a unit root				
Exogenous: Constant				
Lag Length: 0 (Automatic - based on SIC, maxlag=1)				
			t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic			-1.958445	0.3029
Test critical values:	1% level		-3.639407	
	5% level		-2.951125	
	10% level		-2.614300	
*MacKinnon (1996) one-sided p-values.				

Augmented Dickey-Fuller Test Equation				
Dependent Variable: D(RGDP,2)				
Method: Least Squares				
Date: 11/07/18 Time: 15:11				
Sample (adjusted): 1983 2016				
Included observations: 34 after adjustments				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(RGDP(-1))	-0.236679	0.120851	-1.958445	0.0589
C	350.1622	261.2177	1.340500	0.1895
R-squared	0.107031	Mean dependent var		-24.11088
Adjusted R-squared	0.079126	S.D. dependent var		1082.071
S.E. of regression	1038.379	Akaike info criterion		16.78573
Sum squared resid	34503398	Schwarz criterion		16.87552
Log likelihood	-283.3574	Hannan-Quinn criter.		16.81635
F-statistic	3.835507	Durbin-Watson stat		1.646627
Prob(F-statistic)	0.058943			

Null Hypothesis: D(UNEMP) has a unit root				
Exogenous: Constant				
Lag Length: 1 (Automatic - based on SIC, maxlag=1)				
			t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic			-4.542071	0.0010
Test critical values:	1% level		-3.646342	
	5% level		-2.954021	
	10% level		-2.615817	
*MacKinnon (1996) one-sided p-values.				
Augmented Dickey-Fuller Test Equation				
Dependent Variable: D(UNEMP,2)				
Method: Least Squares				
Date: 11/07/18 Time: 15:11				
Sample (adjusted): 1984 2016				
Included observations: 33 after adjustments				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(UNEMP(-1))	-0.775924	0.170831	-4.542071	0.0001
D(UNEMP(-1),2)	0.393461	0.152052	2.587665	0.0148
C	-0.076778	0.140326	-0.547145	0.5883
R-squared	0.409096	Mean dependent var		-0.0090

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Adjusted R-squared	0.369702	S.D. dependent var	1.005101
S.E. of regression	0.797962	Akaike info criterion	2.472997
Sum squared resid	19.10231	Schwarz criterion	2.609043
Log likelihood	-37.80445	Hannan-Quinn criter.	2.518772
F-statistic	10.38484	Durbin-Watson stat	2.015227
Prob(F-statistic)	0.000374		

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