INDUSTRIAL TRANSFORMATION, DEVELOPMENT AND CONTRIBUTION TO ECONOMIC GROWTH –A NIGERIAN PERSPECTIVE

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ABSTRACT

Industrial transformation is very crucial for growth and development of developing economies. The study demonstrates the impact of industrial transformation on different dimensions of development specially in case of Nigeria. The dimensions appropriately cover economic, investment and sustainability dimensions as a true representative of development of a nation. The impact of industrial transformation on growth has also been evaluated. Both positive and negative relationships and impacts of all the interconnected growth, development and industrial transformation parameters have been observed in the study.

INTRODUCTION:

In Africa, the Nigerian economy is one of the largest. It has been focused mainly on the petroleum sector since the late 1960s. In shipping, construction, engineering, and government services, a series of world oil price rises from 1973 created rapid economic growth. As this culminated in a massive migration of rural people into the greater urban centres, agricultural development stagnated to such a degree that cash crops such as palm oil, peanuts, etc (groundnuts), and cotton no longer remained to be most exported commodities. While most of the population remained engaged in agriculture, very little food was produced, requiring increasingly expensive imports. This issue was resolved by the different governments (most of them military-run) by banning agricultural imports and concentrating on various agricultural and indigenization plans, albeit briefly. The government began to privatize many state-run companies in the late 1990s, especially in communications, electricity, and transportation, to increase service quality and decrease government dependency.

At the turn of the 21st century, most companies have been effectively privatized, but a handful remained in government hands. Nigeria began to face an unpredictable revenue flow at the turn of the 21st century, which the government sought to counter by borrowing from foreign markets, implementing separate austerity policies or doing both at the same time. As a result, an ever-increasing share of the national budget was required for debt reduction, which meant that very little of Nigeria's revenue was being spent on the people and their needs, with graft dominating government operations. The nation benefited from a debt reduction scheme in 2005 whereby the bulk of its debt to a collective of creditor countries known as the Paris Club would be forgiven after a sufficient amount had been repaid. In 2006, Nigeria fulfilled this condition successfully, becoming the first African country to settle its debt with the community. In 2016, Nigeria entered a recession, partially due to declining global oil prices, but in the next two years it saw success with its rebound.

Such capital-intensive factories as steel mills, pulp and paper mills, petrochemical plants, and an aluminium smelter have been developed by the federal government. In the past, international investors controlled large-scale manufacturing, dominated by the production of textiles, cigarettes, drinks, and cement. The indigenization policies of the government have altered the ownership situation, while the administration and successful control of most of the major factories have remained in the hands of multinational corporations' expatriate members. This sector's biggest vulnerability has been its dependency on imported raw materials. The condition changed in 1987, when it was barred from purchasing a wide variety of raw materials, although the ban was subsequently rescinded. Even so at the beginning of the 21st century, imports were subject to certain limitations and producers were forced to use raw materials from local suppliers. There are a variety of major industries in each state capital, but a few big industries, such as paper mills and steel mills, are situated in rural areas where new communities have developed to support the factories.

The manufacturing of iron tools such as hoes and hatchets, door hinges, bolts, and dane weapons are typical industries carried out in homes or in improvised workshops (firearms of obsolete design, originally of European manufacture). After the near breakdown of the Nigerian economy in 1983, when most wage earners were unable to pay for factory-made soap and imported table salt, conventional soap-and salt-making workshops emerged in large numbers. Since

the economy stabilized, these factories persisted, although they remained clustered in rural areas. As with canework and the making of bags and mats from raffia, pottery making and wood carving are widespread. Connecting all these to employment in the country, huge data could have been analysed to see how the employment scenario of the Nigerian Economy changed, however we have depicted employment from 2008 below.

Employment as a percentage of the total employment in agriculture, industry and services are plotted. Employment in agriculture has decreased, however increased in industry and services.

Employment in AGRI, INDU, SER

60
50
40
30
20
10
0
Employment in Agri (% of GDP) Employment in Industry (% of GDP)
GDP)

2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019

Figure 1

Source: Complied by the authors (worldbank.org)

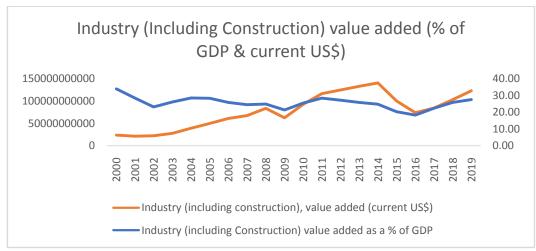


Figure 2

Source: Complied by the authors (worldbank.org)

Over the years the industry including construction value added as a percentage of the gross domestic product and in current US dollar has increased in Nigerian Economy.

LITERATURE REVIEW:

The aggregate output function has a constant, average and marginal capital commodity and does not show convergence assets (Barro & Sala-i-martin, 2004). There are two distinct definitions of the term economic development of industrialization: it can be conceived as a change in the production and labor force trend of a nation towards manufacturing or secondary industry (Clunies-Ross, Foresyth, & Huq, 2010).

Economic development has been conceived over a period of time as a rise in per capita income (Clunies-Ross, Foresyth, & Huq, 2010; Jhingan, 2005; Abbott, 2003) and good governance, good legal structure, natural resource supply, relatively low-cost skilled labor and technology are perceived to be primary positive factors driving industrialization. The social and economic transition mechanism that turns a human being from an agricultural to an industrial one. Industries, in their opinion, bring about change in three ways: automation, large scale energy growth, and production of metallurgy. Both factors are closely associated with the development of the economy. They also assert that the sociological phase of rationalization takes industrialization with it (O'Sullivan and Sheffrin, 2007).

The correlation between the degree of industrialization and the per capita income of developed countries is positive (Bolaky, 2011). Empirical data suggests that there is a greater marginal production of labor from the industrial sector than in the agricultural sector, so the transition of capital from the agricultural sector to the industrial sector increases the overall productivity of the economy (Olajide, Akinlabi, & Tijani). Studies linked to industrialization and economic development are available. Industrialization by international capitalists has been proposed to have a beneficial impact on global growth rates (Blomstrom, Lipsey, & Zegan, 1994). They also argued that the contribution of industrialization to the economic growth rate relies on the amount of income thresholds.

OBJECTIVE OF THE STUDY:

The objective of the study is to evaluate the impact of industrialization on growth and development of Nigerian Economy.

METHODOLOGY AND ANALYSIS OF DATA:

The models were defined and the models were evaluated using regression with Newey West standard errors. Estimation of the parameters of the models required data on industrial production, scores for the evaluation of Gross Domestic Product (annual growth), sustainable economic development and also employment in Nigerian industry.

In statistics and econometrics, a Newey-West estimator is used to provide an approximation of the covariance matrix of a regression type model's parameters when this model is implemented in cases where the normal regression analysis assumptions do not apply. Whitney K. Newey and Kenneth D. West devised it in 1987, but there are a number of later versions. Whitney K. Newey and Kenneth D. West devised it in 1987, but there are a number of later versions. The estimator is used to attempt to solve autocorrelation (also referred to as serial correlation) and heteroskedasticity in the models' error terms, often for time series data regressions.

Model Specification:

Gross Domestic product = $\beta_0 + \beta_1$ Industry + μ

Sustainable Economic Development Score = $\beta_0 + \beta_1$ Industry + μ

The impact of industrial output (including construction) value added as a percentage of gross domestic product on the growth rate of the Nigerian economy from 2008 to 2019 is estimated thus helping to estimate the degree of impact. There is a positive impact of industrialization on the gross domestic product (supported by enough literature). Level of significance accepted up to twenty five percent (supported by D. Gujrati) confirms the assumption that industrialization does have a positive impact on growth of Nigerian Economy.

Table 1

Regression with Newe	y-West standard error	s Number of obs $=$ 12
maximum lag: 0	F (1,	10) = 1.65
	Prob >	$\mathbf{F} = 0.2286$
Newey	y-West	
NigeriaGDP~l Co	ef. Std. Err. t P>	t [95% Conf. Interval]
Industry~ria 0.39	0.30 1.28 0.23	-0.29 1.06
_cons -5.15	7.67 -0.67 0.52	-22.24 11.94

As a modern approach to assessing well-being, the Boston Consulting Group introduced the SEDA in 2012. The three fundamental dimensions being economic, investment, and sustainability. All the three elements are further divided to vividly explain the detailed dimensions, which in turn prove to demonstrate the status of development of a nation. Economic dimension includes income, economic stability and employment. Investment dimension has health, infrastructure and education. The sustainability dimension has four sub dimensions namely equality, civil society, governance and environment.

Income includes GDP per capita and also purchasing power parity. Economic stability has inflation, inflation volatility and GDP growth volatility. Employment has unemployment and employment to population ratio 15 plus. The next parameter is investment, which has three dimensions. The first dimension education includes school enrollment, tertiary, years of school primary to tertiary, teacher pupil ratio primary and average of math and science score.

Health includes life expectancy at birth, mortality rate under age 5, prevalence of HIV, Incidence of tuberculosis, populations either undernourished or obese, immunization, physician's density and hospital beds. Finally infrastructure that includes individuals using the Internet, mobile cellular subscriptions, quality of roads network, quality of railroads infrastructure, improved water source, improved sanitization facilities and quality of electricity supply.

Finally the sustainability parameter has four sub dimensions. Equality includes gini index, inequality in education and inequality in life expectancy. Civil society includes level of civic activism, interpersonal safety and trust index, intergroup cohesion measure and gender gap. Governance includes corruption and rule of law indicator, political stability and absence of violence/terrorism, voice accountability indicator and property rights index. Finally environment includes air quality, terrestrial and marine protected areas, carbon dioxide intensity and electricity production from renewable sources. All these parameters together constitute the sustainable economic development assessment score.

Figure 3

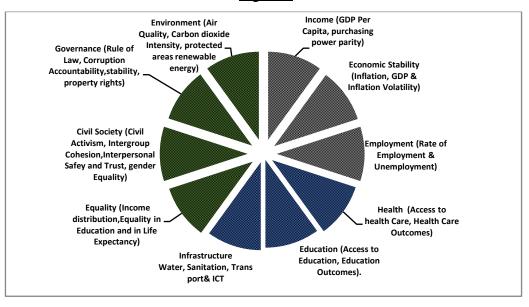
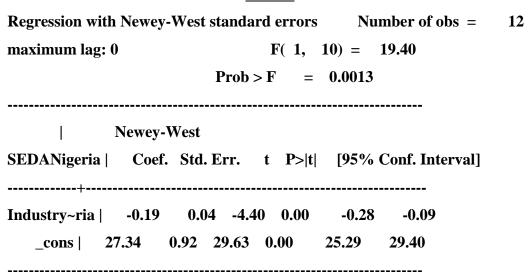


Table 2



However the impact of industrialization on overall development has been found to be negative. Development is sustained by equality, environment, education, employment etc which may incur negative impacts due to high industrial growth or outputs. However this analysis can be extended in the future in trying to determine the impact of industrialization in development dimensions estimated individually.

CONCLUSION:

This work focused on the impact of industry on economic growth and development in Nigeria (2008-2019) essentially. It has a positive impact on growth but a negative impact on development. Strong policy steps for developing human resources should be set in motion. Growth in order to make citizens capable of using and disseminating new technologies in industrial manufacturing,

thus improving the total efficiency of all industries and ensuring sustainable development. For industrial development, the government should build a good climate. Creating an encouraging investment climate. Enhancement of social and economic infrastructure, in particular the availability of electricity, the transport system and good practical schooling. This will reduce manufacturing costs, increase the distribution of technologies and make Nigerian producers more competitive. Also by improving judiciary system, creating a neutral environment and improving security system by reducing crime rate will help a lot.

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366

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