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IMPACT OF GLOBALIZATION ON THE THIRD WORLD: VENEZUELA AS POINT OF DEPARTURE

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ABSTRACT: *The paper examines the concept of globalization and analyses its impact on the political economy and social well-being of the Venezuelan state. Using the descriptive method and library instrument, findings show that Venezuela and the Venezuelans are currently caught in the web of globalization as America and Europe designed-hence the state and fate of Venezuela even as an oil rich country appears to be on the brink. The paper concludes that globalization as a real political and economic packaging of American global hegemony, was designed to enforce on the world, American political views through United Nations and the American foreign policy directives and American economic interest through the World Bank and the IMF. In the context of globalization there is a rich neighbor (the U.S.A) suffocating life out of the masses of a poor nation Venezuela, all because of differences in political ideological lining. the paper recommends that for Venezuela to bring back its glory as a sovereign entity, the united states must withdraw from interfering in the affairs of Venezuela, which seems cumbersome, but this can be influenced by other foreign powers such as Russia and china. Venezuela must try harder to curtail the level of human suffering by soliciting aid from the outside. This will provide a room for essential services to be delivered and attract citizens who left the country to return for strengthening their own country, among other things.*

KEYWORD: Globalization, Third World, Venezuela, Point of Departure, Latin America

INTRODUCTION

The term Globalization has become a bandwagon which the neo-liberals and their intellectual backers have fashioned and insisted that the entire universe must flow with despite historical, situational, resource capacities and the general developmental needs and challenges peculiarities. On this note, globalization as Okoyeocha (2009) observed, has produced compelling (and most times daring) effects on the environment, on culture, on political systems, on economic development and prosperities, and human physical well-being in societies around the world. This is as the era of globalization intensifies global inequality, global poverty, global calamities and catastrophes in large industrial waste that are discriminately dumped to the developing countries by the developed worlds. Global warming and climate changes and their after effects such as tsunamis and droughts are understood as the effects of globalization. While, these global economic and political outlook rage on, arguably, globalization equally made the flow of capital, labor, goods, ideas and information much faster across the globe than ever before. It is clear that part of the world in the Europe (England, France, Germany, Netherlands, Switzerland etc.) and the north America (especially

United States of America USA) continue to glow in the light of globalization. The countries in the southern hemisphere fondly refers to as the Third World which denotes all countries in Africa and the Latin America despite their proven natural and human resources continuously found the light of globalization eluding them (Sachs, 1999).

The simple and glaring factual relationships between the First Worlds (Europe and USA) and Third World is uneven developmental balance which translates into economic prosperity (great GDPs), technological advancement, human capital development, excellent infrastructures, foreign direct investment (FDI) reverses and political stabilities and general wellbeing's, while these social economic developmental indicators have their reversal obtainable in the global south (Africa and Latin American countries). Could this duality in globalization, the first world and the third world be a design or was it ordinarily? It is said that globalization means and implies many things to many people. According to Kellner (1995) "the term (globalization) is used in so many different contexts, by so many different people, for so many different purposes, that it is difficult to ascertain what it is at stake in the globalization. And that, what functions the term serves, and what effects it has for contemporary theory and politics remains problematic" (in Dimitrova, 2002). This paper examines some of the implications and consequences of globalization as being experienced in Venezuela as a third world country. The next segments provide the theoretical frame for the paper, followed by globalization and its consequences in details.

The Theoretical Framework of Analysis

At this juncture it is pertinent to make clear the theoretical back-up for the paper which is the dependency theory. According to Offiong (1980) the concept of dependency was coined by the Brazilian sociologist Fernando Henrique Cardoso to make economic and political analysis of the global development and under-development in the Third World countries. Some important features of the dependency theory include the assumption that, crucial economic decisions are made not by the countries of the third world even as they harbor resources (mineral/natural) but by powers and huge global corporations and bodies outside the shores of the third worlds. These political and economic relations of domination and exploitation by foreigners supports by either outright application of political pressure or even military interventions in the imperial nature on the colony/satellite or nation state, continue the perpetuation of poverty and misery in such Third World while the dominating power reap from such calamities in many ways.

The theory further posits that in this global exploitative political and economic relations of domination, the Third World elites (bourgeoisie's classes both political and economic) collaborate with the core nations political and economic apparatus to exacerbate misery, poverty and general backwardness of the Third World. Other important tenets of the dependency theory are "conditioning situations" like loan and military assistance, technological, socio-political, and capital domination of the satellite by the metropolis, wherein the multinational corporations play a crucial parasitic role in favor of their home countries.

This theory and its application to understanding globalization could not be more comprehensible than in the ongoing and clearly USA and European attempt at political emasculations of Venezuela, the U.S.A and Europe rapacious economic strangulations of the nation's Venezuela and U.S.A and European sowing the cord of social instability in the nations after the demise of presidents Hugo Chavez (1954-2013). The state of Venezuela has been in the news for so many unpleasant stories. This is a rich country in terms of proven crude oil reserve, but with its highest currency (*Bolivar*) worthless than tissues papers. Venezuela is now a country which the global media (CNN, ALJAZEERA, FRANCE 24, BBC etc.) daily portrays as a country under dictatorship of Presidents Nicolas Maduro.

The western media daily shows Venezuelan citizens leaving the country in mass migration because of the leadership cannot provide for the citizens' basic human necessities such as tissue papers and other sanitary necessities. In Venezuela the print newspaper outlets have mostly folded up due to lack of papers and other industrial materials needed for daily printing. Such materials are mostly imported from the U.S.A. (Large parts of Venezuela (including schools and hospitals) is in darkness due to the facts that spare-parts for machines to generating electricity for their operations must be imported from the USA and other European countries and the USA and such Europeans are not ready to satiate the Venezuela importation needs.

The reason for the above is partly because Venezuela is in the bad book of International Monetary Fund (IMF) and the World Bank which certified the Venezuelan economy as unhealthy, and therefore, cannot guarantee the Venezuelan trades: importation and exportation (which are mostly to the Americas: USA and other Latin American neighbors of Venezuela). Secondly, the USA and Europe did not certify Venezuela as a true democratic nation even as the nation recently conducted elections that saw the incumbent presidents Nicholas Maduro emerged for his second tenure and being sworn in by the nation's constituent assembly and the judiciary as recognized by the military which continue to openly show its loyalty to President Maduro. The simple questions now are why is the state and fate of Venezuela even as an oil rich so bad? The simple explanation and answers to such query is that Venezuela and the Venezuelans are currently caught in the web of globalization as America designed. This position is made clear in the light of understanding of globalization by (Dicken, 2007; Steger, 2007; and Delanty and Rumford, 2007).

Globalization and Its Consequences

According to Ritzer (2007), one of the points that is almost always made about the study of globalization is how contested almost everything is, including the definition of globalization itself. This has led to scholars' definitions and explanations of the concept differently. According to Wilczek (2008) who buttressed Anthony Giddens' definition of the concept, globalization is the "decoupling of space and time... with instantaneous communications, knowledge and culture that can be shared around the world simultaneously." Accordingly, Camedessus (1998) refers to the concept as disinterested movement of history bestowing benefits without discrimination upon the earth's people (in Okege, 2008). With this form of definition as championed by especially Camedessus, the developmental state or phase in developing countries or precisely their underdevelopment state, came into mind. United Nations Conference on Trade and Development UNCTAD (2004) made a detailed categorization and classifications of the world countries and an assessment of the states of LDCs (least developed countries) and the DCS (developing countries) which are of particular importance for clarity and understanding of globalization and its consequences as follows:

> The United Nations has used the term least developed countries (LDCs) to denote a category of countries (originally 24, currently 50) that are poor and considered highly disadvantaged in their development process. Countries on this list are considered to have a particularly high risk of failing to overcome poverty, and to need the highest degree of support from the international community in their development efforts (p.2).

The above definition and global economic dichotomization of the world clearly implies that while some nations progress and prosper economically, others must wait to be assisted, supported, help by others. Invariably for those helped, supported and assisted consequences awaited this form of developmental drive and orientation. Albrow (1990) saw globalization as the processes by which the peoples of the world are incorporated into a single world society, global society. But the understanding of Globalization by Curry and Newson (1998) best mirrored the implications of globalization and its consequences therefrom as affect Third World nations. They view globalization as a material set of practices drawn from the world of business combined with a neo-liberal market ideology.

According to Castells (1996) globalization is the institutional expressions of capitalist society, a rebrand of capitalism that is profoundly different from its historical predecessors with the system now having two distinctive features: it is global and it is structured, to a large extent, around a network of financial flows. As for Geyer and Bright (1995) their conclusion was that the process of globalization was not just acceleration along a continuum of European expansion but a new ordering of relations of domination and subordination among all regions of the world. According to the World Trade Organization (WTO) about two thirds of its members around 150 countries are developing countries. They play an increasingly important and active role in the WTO because of their numbers, and because they increasingly look to trade as a vital tool in their development efforts (Geyer and Bright, 1995). Globalization has not been equally favorable to especially weak nations and people in the globe. According to Batterson and Weidenbaum (2001), globalization fosters economic growth for global corporations at the expense of the world's peoples. This economic growth is accompanied by greater economic instability and financial crises. Multinational corporations enjoy record profits as follows (Batterson and Weidenbaum, 2001):

a) U.S. companies' direct investment abroad grew by more than 50 percent, from \$613 billion in 1994 to over \$980 billion in 1998. This coincided with five consecutive years of double-digit increases in corporate profits, pushing the before-tax corporate profit rate to 8.5 percent, the highest level since the mid-1960s. The after-tax profit-to sales rate rose to 6.4 percent, the highest in the post- World War II period.

b) Meanwhile, the world's peoples experience one global financial crisis after another, fueled by unchecked foreign investment and debt:

   i) Latin America's debt crisis in the early 1980s plunged the region into years of hyper-inflation and economic depression. Annual economic growth in the region averaged just 0.8 percent from 1981 to 1990.

   ii) The Mexican peso crisis in 1995, the result of a sudden exodus of substantial foreign investment and Mexico's low currency reserves, crashed the Mexican economy.

Economic growth in Mexico went from 4.2 percent in 1994 to *negative* 6.2 percent in 1995. U.S. economic growth stumbled, too, dropping from 3.5 percent in 1994 to just 2 percent in 1995.

iii) Asia's 1997-98 financial crisis—the result of a lack of adequate institutional controls over capital—sent world markets tumbling and deepened already desperate economic conditions in other regions, as far away as Russia and Brazil. The East Asia/Pacific region sank into a deep economic recession with gross domestic product (GDP) dropping 1.5 percent in 1997-98. Russia's economy dropped by 6.6 percent during the same period, while inflation ran at an annual rate of 119 percent. Brazil, which had experienced robust economic growth for the five prior years, flat-lined in 1997-98, with inflation topping 433 percent. Another critical dimension to the consequence of globalization in the Third World countries is the area of poverty. Batterson and Weidenbaum (2001) found out that Globalization benefits the wealthy and further impoverishes the poor, resulting in a widening wealth gap worldwide between the rich and the poor—especially harmful to the low-income consumer.

Their contentions: The rich are getting richer:

- Income earners in the top one-fifth in the United States make almost twentyfold what income earners in the bottom fifth make. This ratio doubled over the last two decades. The top 1 percent of income earners hold about 40 percent of the country's wealth, more than double the percentage in 1975.
- American families with incomes over $100,000—the richest group of Americans—saw their average net worth soar by 22.4 percent from 1995 to 1998, to $1.7 million per family.
- The United Nations reports that the wealth of the 200 richest people in the world is greater than the combined income of 2 billion of the world's people.

And the poor are getting poorer:

- In the maquiladora trade zones along the U.S.-Mexican border, food, gas, rent, electricity, transportation, water, and refrigeration costs totaled $54 a week in 1998. The average net weekly pay for maquila workers in Mexico is $55.77, leaving $1.77 a week to spend on education, clothing, health care, and other necessities.
- Countries with more than half of their populations living below the national poverty line in the 1990s included Azerbaijan, Chad, Gambia, Haiti, Honduras, Madagascar, Mauritania, Nicaragua, Niger, Peru, Sierra Leone, Tanzania, Vietnam, and Zambia—all of these countries experienced substantial declines in annual export volume from 1980 to 1997.

Batterson and Weidenbaum (2001) contested that, in globalization, open markets worldwide supposed to allow for countries to trade goods and services freely, at a lower cost and with greater efficiency. The result is clear: in countries that welcome globalization, consumers enjoy lower prices, a greater variety of goods and services, and rising living standards. Those that close their doors do not. To the authors therefore with globalization, the rich are getting richer, but so are the poor. The above consequences of globalization and the developing countries have not really improved as studied and presented by Battermanand and Weidebaum (2001). In the positions of Rosenberg, Hirst and Thompson, globalization is a highly misleading description of contemporary social reality (Rosenberg 2005; Hirst and Thompson, 1999).

Impact of Globalization on the Third World: Venezuela as Point of Departure

Sule (2008) defined globalization to imply "the entire globe and humanity living in the era of intensified process marked by accelerated flow of goods, services, capital, images, knowledge, fashion, labour, etc. through electronic information and communication, electronic transfer of large funds across borders and closer relationships and unprecedented interdependence among nations like has never been witnessed in any historical epoch of human existence**.** This segment in this presentation illustrates in details that globalization as meant none of the implications identified by Sule (2008). This is with respect to millions of Venezuelan lives that have continuously been harassed, traumatized and suffocated for the crime that the nation's leadership tends to independently follow another political and economic ideology different from that championed by the USA. The contention hinges on the definition of Globalization by Beck (2000), that globalization implies the weakening of state sovereignty and state structures. The implication of globalization was made more explicit in the lights of Angell's (1911) description of globalization as the world economy becoming so highly interdependent as to make national independence an anachronism, especially in financial markets.

Development is not only the capacity of nations to transform and improve on their numerous human capacity that range political independent, economic independence and market capacity, knowledge use in science and technology, international relations mostly diplomacy. All these aspects of development could translate to education and literacy of the citizens, work and income for the citizen, healthcare services for the people, functional infrastructures and utilities such as hospitals and other forms of healthcare facilities, schools, energy (cooking gas and petroleum etc.), Venezuela a crude oil rich nation lack all of these aspects of developmental needs.

In 1811, Venezuela became the first Spanish-American colony to declare independence, this was not secured until 1821, which was completed only in 1830. From then on, Venezuela battled the crisis of development occasioned by the American capitalist interest and influence in its crude oil reserve, exotic wildlife and admiring agricultural base, up to the early 1990s. The response of the nation's radical political elites was Bolivarian revolution. Bolivarian revolution was a political process led by the late president Hugo Chavez, the founder of the First Republic Movement and later the United Socialist Party of Venezuela (USPV). Nationalism and state led economy was the philosophy of the movement. Late Chavez designed the slogan of the Bolivarian Revolution as: motherland, socialism or death, which he changed to, motherland and socialism. We will live, and we will come out victorious. Chavez, before his death chose as his successor Nicholas Maduro.

From 2015 to date Venezuela, an oil rich country has been passing through the ugliest phase in its socio-economic and political development.

It could be said that this socio-economic and political crisis began during the presidency of Hugo Chavez and just continued into the presidency of Nicholas Maduro. The situation is the worst economic crisis in Venezuela's history, and among the worst crisis experienced in Americas, with hyperinflation, soring hunger, disease, crime and high death rates, and massive emigration from the country. Observers and economists have stated that the crisis is not the result of conflict or natural disaster but the consequences of populist policies that began under the Chavez administrations and the Bolivarian revolution. The Brookings institution saw the Venezuelan crises as best the foster child for how the combination of corruption, economic mismanagement, and undemocratic governance can lead to widespread suffering.

Venezuelans have described their current predicament from the attempts to assert socialist democratic credential sharpened by the Bolivian revolution against the American hegemony in the region and in the globe. Hugo Chavez since 2010 had described and declared that what is happening to them was nothing other than 'economic war' declared against Venezuela by the USA and its allies. The crisis intensifies in an alarming rate under President Nicholas Maduro government, growing more severe as a result of low oil prices in early 2015 and a drop-in production from lack of maintenance capacity of the Venezuelan oil firms and the drifting away of investments from Venezuela at the beckon of the U.S. In the political economy of crude oil exploration and exportation which sustains economies in Latin America and specifically in Venezuela.

Technical and technological capacities of the global oil companies that are multinational (MNC) in nature and whose activities and political considerations determine nations such as Venezuelan solvency, as they held both financial (investment) and payments/repatriations capacities (e.g. access to world bank and IMF and their arteries such a ICBC, JP Morgan Chase, HSBC, Bank of America Citi Group, Lloyd Banking Group, Barclays (in banking) In, Investment service; Morgan Stanly, Fannie Mae, Freddie Mac, UBS, Goldman Sach,). Such oil majors often controlled by American interest and these investment and financial bodies have continuously argued that with the Bolivian revolution from Chavez era their shares and expectations from the crude oil business in Venezuela have not been favorable.

From 2015 the global crude oil prices have not moved substantially from $50 per barrel and Venezuela has a lot of unsettled debt with the USA, and its banks therefore, the Breton-Wood Institutions (IMF and World Bank) believe that Venezuela stand no right to access further World Bank or IMF economic concessions to attracts trades in its crude reserve, which proceeds might provide huge amounts of funds it require to run state enterprises like hospitals and their supplies, schools, daily utilities (such as toiletries which are provided as a social service conceded to the people (citizens) as the dividend of their revolutionary sacrifices). Thus, Venezuela especially launched into the pitied limbo created by the global media (CNN, BBC, France 24, Aljazeera etc.).

CONCLUSION AND RECOMMENDATIONS

The paper clearly identified globalization as a real political and economic packaging of American global hegemony which was designed to enforce on the world, American political views through United Nations and the American foreign policy directives and American economic interest through the World Bank and the IMF. In the context of globalization there is a rich neighbor (the U.S.A) suffocating life out of the masses of a poor nation Venezuela, all because of differences in political ideological lining.

For Venezuela to bring back its glory as a sovereign entity, the united states must withdraw from interfering in the affairs of Venezuela, which seems cumbersome, but this can be influenced by other foreign powers such as Russia and china.

Venezuela must try harder to curtail the level of human suffering by soliciting aid from the outside. This will provide a room for essential services to be delivered and attract citizens who left the country to return for strengthening their own country.

Venezuela must encourage and improve agriculture even for sustenance, to able to feed the citizens, which is a pre-requisite against hunger and for social stability of the citizenry.

Nicholas maduro must continue to earn the support of the military in order to assuage the popularity and support for Guaido who is the self-declared opposition president of the country.

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AFRICA 4.0 AS A PERSPECTIVE SCENARIO FOR NEO-INDUSTRIALIZATION IN THE 21ST CENTURY: GLOBAL COMPETITIVENESS AND SUSTAINABLE DEVELOPMENT

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ABSTRACT: *Purpose: The article studies the perspectives of involvement of African countries in the global Fourth industrial revolution based on breakthrough technologies of Industry 4.0. Design/methodology/approach: The methods of imitation modeling, trend analysis, regression, correlation analysis, variation analysis, and scenario analysis were used for determining the future scenarios of development of African countries for periods of up to 2030. The sources of statistical data for the research included secondary data from the IMF and the World Bank. Findings: It is substantiated that the most perspective scenario is neo-industrialization, which has been conducted in recent years by the most progressive countries of the European, American, and Asia-Pacific regions of the world. This scenario will ensure global competitiveness and sustainable development of African countries in the long-term. Originality/value: As a result, the authors develop a conceptual model of Africa 4.0 and offer the algorithm of neo-industrialization of African countries based on breakthrough technologies of Industry 4.0. The article opens a wide field for further scientific research, which should be devoted to adapting the conceptual model of Africa 4.0 to the national specifics of certain African countries for maximization of effectiveness of its practical application.*

KEYWORDS: Fourth Industrial Revolution, Breakthrough Technologies, Africa 4.0, Industry 4.0, Neo-Industrialization

JEL Code: Q01, O14, O31, O32, O33, O38, O55.

INTRODUCTION

Modern Africa entered a new age of globalization, in which its integration into the global economic system as a perspective participant that seeks its own interests and possesses the unique opportunities for growth and development takes place. The most important priorities in this process are increase of global competitiveness and provision of sustainable development. Globalization of modern Africa takes place against the background of the Fourth industrial revolution, which covered most countries of the world.

According to the latest (as a result of 2018) rating of global digital competitiveness ("World Digital Competitiveness Ranking"), the African region remains untouched by the Fourth industrial revolution. The only country of the region that is present in the rating is South

Africa - 49th position among 63 countries, with 56.876 points out of 100 (IMD, 2019). In the course of globalization, countries of Africa won't be able to remain aside from the global tendency. The current scientific and practical problem of the modern economics is selecting the optimal method of Africa's accession to the Fourth industrial revolution.

The most progressive countries of the European, American, and Asia-Pacific regions of the world (firstly, countries of the OECD – Germany, the USA, and Japan) have been implementing the model of neo-industrialization in recent years (2012-2018). This envisages transition to Industry 4.0, connected to ubiquitous dissemination of the breakthrough technologies of the Fourth technological mode. It is expected that they will be able to start production of hi-tech products in all spheres of economy and develop and use it as a growth pole (a source of acceleration of economic growth).

At the same time, a lot of developing countries (e.g., BRICS) have more restrained models of participation in the Fourth industrial revolution, which envisage digital modernization of economy. Within this model, the breakthrough technologies (e.g., AI and the Internet of Thins), which belong to the Fourth technological mode, are implemented in certain – hi-tech – spheres that are unified into Industry 4.0. Digital modernization of other spheres envisages implementation of technologies of the Third technological mode (e.g., cloud technologies, RFID-technologies, and broadband Internet).

Thus, implementation of the models of participation in the Fourth industrial revolution is inadmissible, as instead of growth of global competitiveness and provision of its sustainable development it may lead to opposite results – depletion of national resources with impossibility of development of effective production of hi-tech products, absence of sale in domestic market, and crisis of overproduction. Countries of Africa have to develop their own model, which take into account the current needs and specific features of the economy. The purpose of this paper is to study the perspectives of involvement of African countries in the global Fourth industrial revolution based on breakthrough technologies of Industry 4.0.

MATERIALS AND METHOD

The perspectives of development of African countries in the modern economic conditions for provision of their global competitiveness and sustainable development are discussed in multiple works of the modern authors: Batuo et al. (2018), Efremenko et al. (2017), Ndaguba and Hanyane (2019), Tiruneh et al. (2017), and Wamboye and Sergi (2019). The conceptual foundations and practical experience of various countries in the sphere of implementing the breakthrough technologies of Industry 4.0 are studied in detail in the works Bogoviz (2019), Popkova (2019), Popkova and Sergi (2019), Popkova et al., (2019), and Rajput and Singh (2019).

At the same time, it should be noted that the objects of the research in these works are primarily countries of the European, American, and Asia-Pacific regions of the world. The issues of participation of African countries in the Fourth industrial revolution are poorly studied in the existing publications and remain unsolved.

In this paper, the authors use the methods of imitation modeling, trend, regression, and correlation analysis, variation analysis, and scenario analysis for determining the future scenarios of development of African countries until 2030. The selection of data includes information for all countries of Africa. The analyzed indicators are as follows

- Global competitiveness index (the World Economic Forum);
- Sustainable development index (the International Institute for Sustainable Development);
- Growth Rate of GDP in constant prices according to the IMF;
- GDP per capita according to the IMF;
- Total volume of investments according to the IMF;
- Innovations index according to the WIPO;
- Sectorial structure of gross added value according to the World Bank.

All indicators are analyzed based on the 2018 data; certain indicators (with available information) are analyzed based on the data of their dynamics for 2000-2022 (the data for 2019-2022 are forecasted data). The initial statistical data are given in Tables 1 and 2.

Table 1. Indicators of Socio-Economic Development of African Countries in 2018.

Country	Global competitiveness index, 1-7	Sustainable development index, points 1-100	Growth rate of GDP in constant prices, %	GDP per capita, USD	Total volume of investments, % GDP	Innovations index, points 1-100
	y_1	y_2	x_1	x_2	x_3	x_4
Angola	n/a	49.6	1.528	4,627.096	7.308	n/a
Benin	n/a	49.0	6.032	813.496	27.354	n/a
Botswana	4.30	n/a	4.188	7,543.525	31.863	n/a
Burkina Faso	n/a	50.9	6.339	681.47	17.654	18.95
Burundi	3.21	49.8	n/a	n/a	n/a	n/a
Cabo Verde	3.76	n/a	n/a	n/a	n/a	n/a
Cameroon	3.65	55.8	4.297	1,250.993	20.578	n/a
Central African Republic		37.7	5.03	439.516	17.894	n/a
Chad	2.99	42.8	2.418	802.156	20.872	n/a
Democratic Republic of the Congo	3.27	43.4	3.451	473.991	13.076	n/a
Republic of Congo	n/a	52.4	8.826	1,980.551	18.724	n/a
Cote d'Ivoire	n/a	55.2	n/a	n/a	n.a	19.96
Equatorial Guinea	n/a	n/a	-5.098	13,258.96	42.724	n/a
Eritrea	n/a	n/a	3.646	988.471	6.672	n/a
Eswatini	n/a	n/a	n/a	n/a	n/a	n/a
Ethiopia	n/a	53.2	7.51	889.181	35.274	n/a
Gabon	n/a	n/a	2.661	7,559.919	36.495	n/a
Gambia	3.61	51.6	3.497	503.361	16.537	n/a
Ghana	3.72	n/a	9.164	1,617.693	25.738	24.52
Guinea	3.47	52.1	4.896	553.961	17.02	20.71

Guinea-Bissau	n/a	n/a	5	711.75	12.361	n/a
Kenya	3.98	56.8	5.753	1,681.247	19.916	31.07
Lesotho	3.20	51.5	2.359	1,308.384	15.342	n/a
Liberia	n/a	48.3	5.345	508.919	n/a	n/a
Madagascar	3.40	45.6	4.814	418.647	18.169	24.75
Malawi	n/a	50.0	5	338.202	12.147	n/a
Mali	n/a	n/a	4.73	848.597	19.451	n/a
Mauritius	n/a	64.5	4.014	10,054.75	22.562	n/a
Mozambique	2.89	50.7	5.5	406.191	70.736	23.06
Namibia	3.99	n/a	4.846	5,355.723	23.426	28.03
Niger	n/a	n/a	5.528	426.473	43.003	20.57
Nigeria	3.30	47.5	1.893	2,434.924	12.807	22.37
Rwanda	4.35	56.1	6.8	776.223	24.752	26.54
Sao Tome and Principe	n/a	n/a	5.5	1,743.059	28.028	n/a
Senegal	n/a	57.2	7.005	1,027.718	26.962	33.19
Seychelles	3.80	n/a	3.407	16,332.05	33.495	n/a
Sierra Leone	3.20	49.1	6.633	668.833	18.79	n/a
South Africa	4.32	n/a	1.569	5,662.045	19.271	35.13
South Sudan	n/a	49.6	-1.085	342.02	17.701	n/a
Tanzania	3.71	55.1	6.924	1,100.183	27.915	28.07
Togo	n/a	52.0	5.3	615.193	24.632	n/a
Uganda	3.70	54.9	5.753	666.621	30.045	25.32
Zambia	3.52	53.1	4.023	1,385.797	38.159	20.66
Zimbabwe	3.32	58.8	-1.509	1,054.339	15.284	23.15
Direct average	3.59	51.48	4.34	2,496.31	23.87	25.06
Standard deviation	0.41	5.21	2.71	3,672.90	11.77	4.75
Coefficient of variation, %	11.35	10.11	62.38	147.13	49.34	18.95

Source: compiled by the authors based on International Institute for Sustainable Development (2019), International Monetary Fund (2019), WIPO (2019), World Economic Forum (2019).

Table 1 shows that each statistical indicator lack information for a lot of countries of Africa. The average level of global competitiveness of the economies of African countries in 2018 is rather low – 3.59 points out of 7. The coefficient of variation constitutes 11.35%, which shows rather high homogeneity of the selection. The average value of the index of sustainable development in African countries in 2018 is also low – 51.48 points out of 100. The coefficient of variation constitutes 10.11%, which shows rather high homogeneity of the selection. Average growth rate of GDP in constant prices in African countries in 2018 is moderate, constituting 4.34%. The coefficient of variation constitutes 62.38%, which shows heterogeneity of selection of data for this indicator.

Average level of GDP per capita in African countries in 2018 is low – USD 2,496.31. The coefficient of variation constitutes 147.13%, which shows heterogeneity of selection of data for this indicator. Average total volume of investments into economies of African countries in 2018 is rather high – 23.87% of GDP. The coefficient of variation constitutes 49.34%, which shows heterogeneity of selection of data for this indicator. Average value of the innovations index in African countries in 2018 constitutes 25.06 points out of 100, which allows characterizing the innovative activity of these countries as low. The coefficient of variation constitutes 18.95%, which shows rather high homogeneity of the selection of data for this indicator.

Table 2. Sectorial Structure Gross Added Value that is Created in African Countries in 2018, %.

Country	Agriculture	Industry	Manufacturing	Services
	x_5	x_6	x_7	x_8
Angola	n/a	n/a	n/a	n/a
Benin	22	21	12	46.9
Botswana	2	30	5	58.7
Burkina Faso	28	21	6	42.0
Burundi	36	15	9	n/a
Cabo Verde	6	19	8	61.3
Cameroon	15	24	15	52.7
Central African Republic	40	15	7	39.3
Chad	49	15	3	33.5
Democratic Republic of the Congo	20	42	20	34.1
Republic of Congo	7	54	8	38.5
Cote d'Ivoire	20	27	13	41.6
Equatorial Guinea	2	56	25	40.7
Eritrea	n/a	n/a	n/a	n/a
Eswatini	n/a	n/a	n/a	n/a
Ethiopia	2	24	13	60.4
Gabon	6	45	7	43.0
Gambia	17	12	5	65.8
Ghana	17	24	6	52.2
Guinea	16	33	11	40.7
Guinea-Bissau	49	13	11	32.3
Kenya	32	17	48.1	45.4
Lesotho	5	33	16	52.6
Liberia	34	12	3	53.6
Madagascar	21	17	n/a	48.4
Malawi	26	14	9	52.4
Mali	38	23	n/a	36.7

Mauritius	3	18	12	66.9
Mozambique	22	18	9	54.2
Namibia	7	28	11	58.4
Niger	40	16	6	39.0
Nigeria	21	22	9	55.8
Rwanda	31	16	6	46.4
Sao Tome and Principe	11	15	7	71.4
Senegal	15	21	11	53.8
Seychelles	2	11	6	71.0
Sierra Leone	60	5	2	32.4
South Africa	2	26	12	61.5
South Sudan	n/a	n/a	n/a	n/a
Tanzania	30	26	6	37.5
Togo	41	17	4	29.8
Uganda	25	20	8	47.1
Zambia	7	36	8	52.7
Zimbabwe	10	22	8	56.3
Direct average	20.93	23.08	10.13	48.90
Standard deviation	15.24	11.11	7.83	11.14
Coefficient of variation, %	72.85	48.16	77.22	22.79

Source: compiled by the authors based on World Bank (2019).

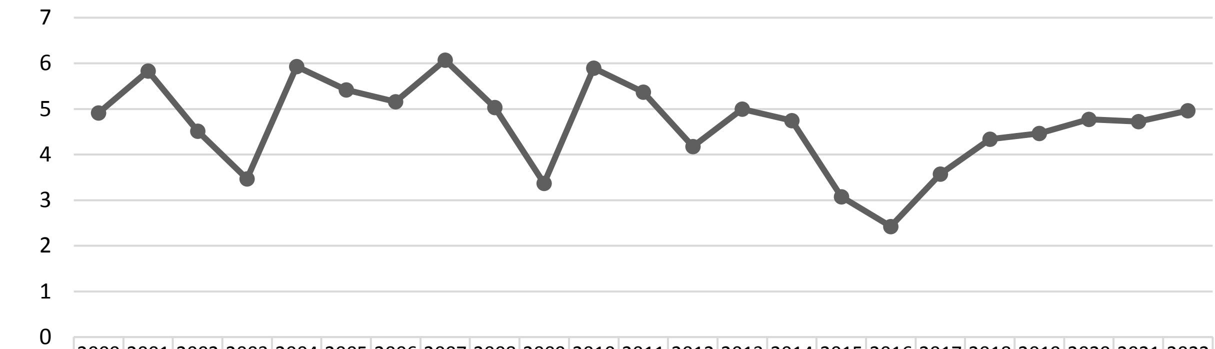
Table 2 shows that statistical data for certain countries are absent. The average share of agriculture in the structure of gross value that is created in African countries in 2018 constitutes 20.93%. The coefficient of variation constitutes 72.85%, which shows heterogeneity of selection of data for this indicator. The average share of Industry in the structure of gross value that is created in African countries in 2018 constituted 23.08%. The coefficient of variation constitutes 48.16%, which shows heterogeneity of selection of data for this indicator.

The average share of Manufacturing в structure of gross value that is created in African countries in 2018 constituted 10.13%. The coefficient of variation constitutes 77.22%, which shows heterogeneity of selection of data for this indicator. The average share of the service sphere in the structure of gross value that is created in African countries in 2018 constitutes 48.90%. The coefficient of variation constitutes 22.79%, which shows heterogeneity of selection of data for this indicator.

RESULTS

The Current Tendencies of Development of the African Countries

Let us study the tendencies of development of African countries in 2000-2022 (the data for 2019-2022 are forecast of the IMF specialists) (Figures 1-3).

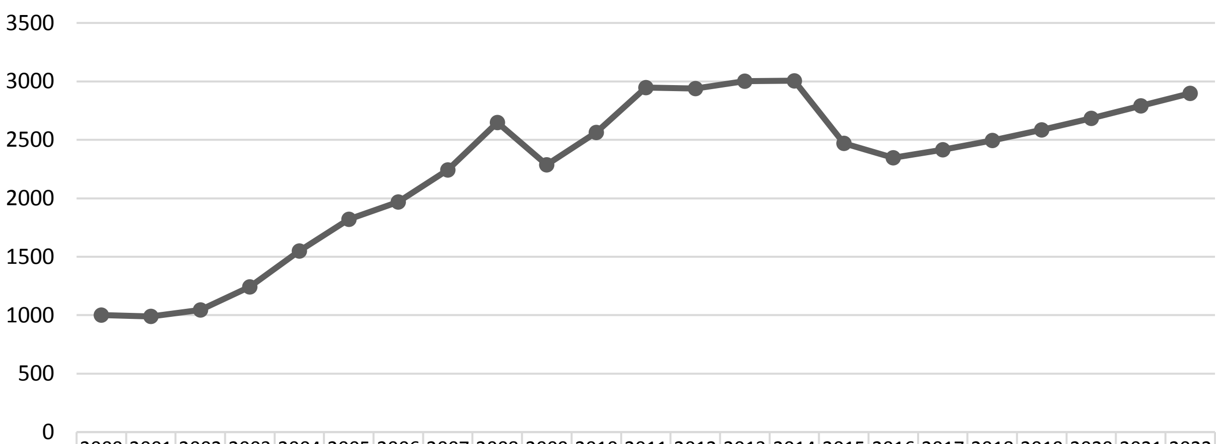


	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
	4.92	5.83	4.52	3.47	5.93	5.42	5.16	6.07	5.03	3.37	5.89	5.37	4.18	5	4.74	3.08	2.43	3.58	4.34	4.46	4.77	4.72	4.96

Figure 1. Dynamics of Average Growth Rate of GDP in Constant Prices in African Countries in 2000-2022, %.

Source: calculated and compiled by the authors based on International Monetary Fund (2019).

Figure 1 shows that average growth rate of GDP in constant prices in African countries in 2000-2022 is peculiar for high volatility. The general trend of this indicator is downward – decrease of its value in 2018 (4.34%) as compared to 2000 (4.92%) constituted 11.78%. Its slight (4.96%) increase is expected by 2022.



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
	1001	989	1044	1243	1549	1822	1969	2242	2649	2286	2564	2946	2939	3003	3006	2469	2347	2415	2496	2586	2684	2791	2897

Figure 2. Dynamics of Average GDP per capita in African Countries in 2000-2022, USD

Source: calculated and compiled by the authors based on International Monetary Fund (2019).

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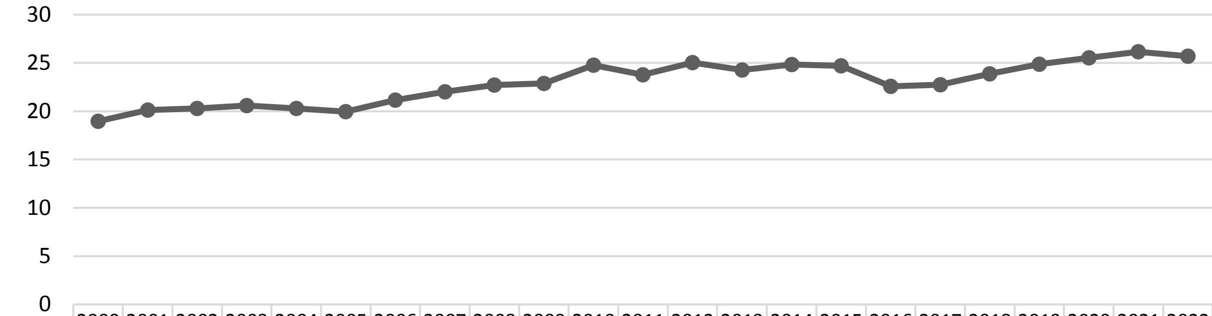
Figure 2 shows that average GDP per capita in African countries in 2000-2022 is peculiar for vivid upward trend. Its value in 2018 (USD 2,496) grew by 1.5 times as compared to 2000 (USD 1,001). Its further growth by 16% is expected by 2022.



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
	19	20.1	20.3	20.6	20.3	20	21.1	22	22.7	22.9	24.8	23.8	25.1	24.3	24.8	24.7	22.6	22.8	23.9	24.9	25.5	26.2	25.7

Figure 3. Dynamics of Average Aggregate Volume of Investments into Economies of African Countries in 2000-2022, % of GDP.

Source: calculated and compiled by the authors based on International Monetary Fund (2019).

Figure 1 shows that average aggregate volume of investments into economies of African countries in 2000-2022 is peculiar for slight upward trend. Its growth in 2018 (23.9% of GDP), as compared to 2000 (19% of GDP), constituted 25.78%. Its slight growth by 7.53% is expected by 2022 (25.7% of GDP).

Average sectorial structure of gross added value that is created in African countries in 2018, is presented in Figure 4.

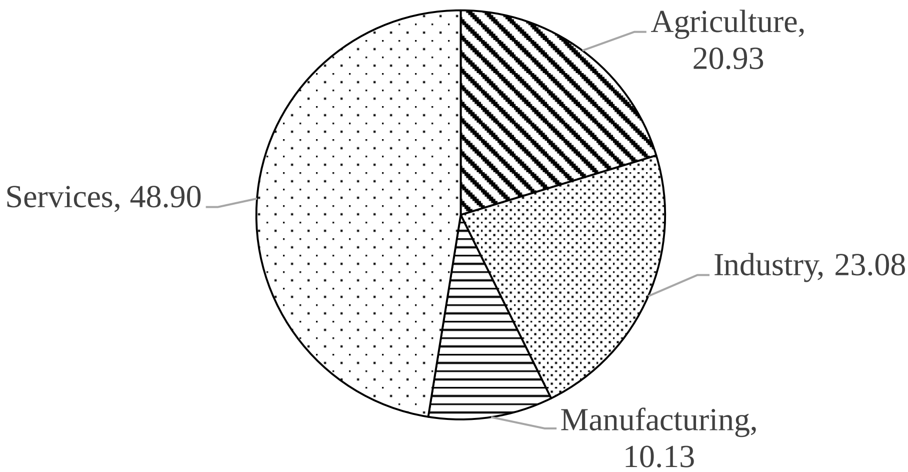


Figure 4. Average Sectorial Structure of Gross Added Value that is Created in African Countries in 2018.

Source: calculated and compiled by the authors based on World Bank (2019).

Figure 4 shows that African countries were peculiar for post-industrial direction in 2018 – specialization in the service sphere, which share in the structure of created gross added value constituted 48.90%. The share of industry constituted 23.08%, the share of manufacturing – 10.13% (aggregate share of industry constituted 33.21%). The share of agriculture constituted 20.93%. On the whole, the sectorial structure of gross added value that is created in African countries in 2018 could be called well-balanced, as there's no vivid domination of the service sphere. This allows developing the production specialization in any direction, including in industry.

For determining the position of African countries in the modern global economic system and determining their specifics, we find the ratio of average values of the indicators of socio-economic development of African countries in 2018 to average values of the indicators of developed countries (OECD) (Figure 5).

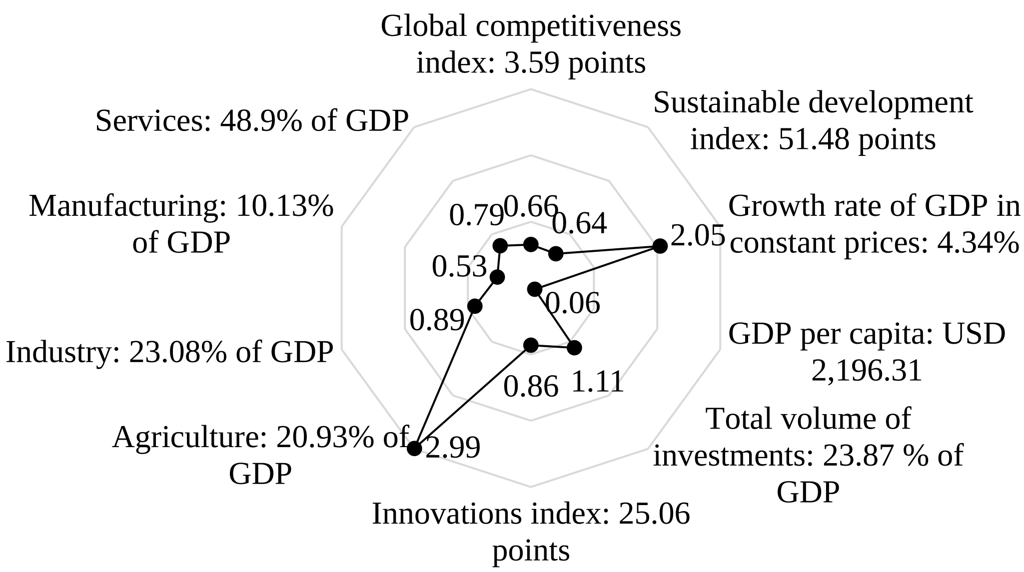


Figure 5. Ratio of Average Values of the Indicators of Socio-Economic Development of African Countries in 2018 to Average Values of the Indicators of Developed Countries (OECD).

Source: calculated and compiled by the authors based on International Institute for Sustainable Development (2019), International Monetary Fund (2019), WIPO (2019), World Bank (2019), World Economic Forum (2019).

Figure 5 shows that countries of Africa are behind the developed countries (OECD) as to the level of GDP per capita (0.06), the level of sustainable development (0.64), global competitiveness (0.66); the difference as to the level of innovative activity (0.86%) is lowed. At the same time, countries of Africa show higher growth rate of GDP in constant prices (2.05) and total volume of investments into economy (1.11). The share of agriculture in the structure of gross added value that is created in African countries is higher than in developed countries (2.99); the share of industry is similar (0.89); and the share of the service sphere (0.79) and manufacturing (0.53) is lower.

Future Scenarios of Development of the African Countries until 2030

Let us determine the most significant factors of global competitiveness and sustainability of development of African countries in 2018. For that we calculate the coefficients of auto-correlation of dependent variables (y_1, y_2) with independent variables (x_1, x_2, x_3, x_4, x_5, x_6, x_7, x_8) based on the data of Tables 1 and 2. The obtained results are given in Table 3.

Table 3. Autocorrelation of the Indicators of Socio-Economic Development of African Countries in 2018.

	x_1	x_2	x_3	x_4	x_5	x_6	x_7	x_8
y_1	0.0447	0.0933	0.1423	0.3441	-0.1520	0.1891	0.0699	0.2121
y_2	0.1779	-0.3775	-0.0738	0.1563	0.2075	-0.0333	0.1555	-0.0059

Source: calculated by the authors.

Table 3 shows that growth rate of GDP in constant prices performs slight positive influence on the level of global competitiveness and sustainability of development of African countries. The influence of GDP per capita is contradictory – its growth slightly increases global competitiveness but decreases sustainability of development of African countries a lot. The influence of the volume of investments, agriculture, the service sphere, and industry is also substantial. Increase of the volume of manufacturing stimulates slight growth of global competitiveness and vivid sustainable development of African countries.

The most significant factor that shows the largest connection with global competitiveness of African countries in 2018 is innovative activity – coefficient of autocorrelation $ry_2x_4=0.3441$. Let us perform the regression and dispersion analysis of dependence of global competitiveness of African countries on their innovative activity in 2018 and compile a model of paired linear regression of the type $y_1=£+\beta*x_4$ (Table 4).

Table 4. Regression and Dispersion Analysis of Dependence of Global Competitiveness of African Countries on their Innovative Activity in 2018.

Regression statistics	
Multiple R	0.3441
R^2	0.1184
Adjusted R-square	0.0974
Standard error	7.4334
Observations	44

Dispersion analysis

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	311.7368	311.7368	5.6417	0.0222
Residue	42	2320.7252	55.2554		
Total	43	2632.4620			

	Coefficients	*Standard error*	*t-statistics*	*P-Value*	*Lower 95%*	*Upper 95%*
£	1.3472	1.4161	0.9514	0.3469	-1.5105	4.2049
β	0.2124	0.0894	2.3752	0.0222	0.0319	0.3928

Source: calculated by the authors.

According to the results of the regression analysis (Table 4), we have the following regression model: $y_1=1.3472+0.2124*x_4$. The compiled model allows stating that growth of innovative activity of African countries by 1-point leads to increase of the level of their global competitiveness by 0.2124 points in 2018. However, the obtained value $R^2=0.1184$ shows weak connection between the studied indicators – the change of the level of global competitiveness of African countries in 2018 only by 11.84% is explained by the change of the level of their innovative activity.

The observed value of f-criterion (5.6417) does not exceed the table value, which, with $\alpha=0.05$, $k_1=m=1$ and $k_2=n–m–1=44–1–1=42$, constitutes 4.08 – which shows statistical significance of the obtained regression equation. This is confirmed by verification with the help of t-criterion, which observed value (2.3752) does not exceed the table value, which, with p=0,05 and n-2=44-1=42, constitutes 2.018. The obtained results show the necessity for increasing the level of innovative activity of African countries for growth of their global competitiveness.

For determining the most preferable scenario of innovative development of African countries let us analyze the dependence of the level of their innovative activity on the volume of hi-tech export in 2018. The initial data for this is given in Table 5, and the results of regression and dispersion analysis in Table 6.

Table 5. Volume of Hi-Tech Export in African Countries in 2018.

Country	Volume of hi-tech export, USD thousand	Country	Volume of hi-tech export, USD thousand
	x_9		x_9
Angola	n/a	Lesotho	n/a
Benin	n/a	Liberia	n/a
Botswana	49,682.76	Madagascar	4,754.27
Burkina Faso	n/a	Malawi	n/a
Burundi	237.96	Mali	2,164.48
Cabo Verde	n/a	Mauritius	26,573.5
Cameroon	28,690.44	Mozambique	32,059.25
Central African Republic	n/a	Namibia	14,734.53
Chad	n/a	Niger	n/a
Democratic Republic of the Congo	n/a	Nigeria	18,192.6
Republic of Congo	84,282.67	Rwanda	n/a
Cote d'Ivoire	n/a	Sao Tome and Principe	321.24
Equatorial Guinea	n/a	Senegal	9,468.67
Eritrea	n/a	Seychelles	62,598.41
Eswatini	n/a	Sierra Leone	1.35
Ethiopia	n/a	South Africa	1,817,259.05
Gabon	n/a	South Sudan	n/a
Gambia	n/a	Tanzania	15,651.17
Ghana	39,603.96	Togo	557.55
Guinea	n/a	Uganda	7,081.46
Guinea-Bissau	n/a	Zambia	35,952.67
Kenya	45,768.89	Zimbabwe	n/a

Source: compiled by the authors based on World Bank (2019).

Table 6. Regression and Dispersion Analysis of Dependence of Innovative Activity of African Countries on the Volume of their Hi-Tech Export in 2018.

Regression statistics	
Multiple R	0.3182
R-square	0.1012
Normed R-square	0.0798
Standard error	12.1627
Observations	44

Dispersion analysis

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	699.8430	699.8430	4.7309	0.0353
Residue	42	6213.1165	147.9313		
Total	43	6912.9595			

	Coefficients	*Standard error*	*t-Stat*	*P-Value*	*Lower 95%*	*Upper 95%*
£	8.9119	1.8675	4.7720	0.0000	5.1431	12.6808
β	0.000015	0.0000	2.1751	0.0353	0.0000	0.0000

Source: calculated by the authors.

The data from Table 4 show weak connection between the studied indicators – innovative activity of African countries growth by 0.000015 points with growth of the volume of their hi-tech export by USD 1,000. Deep regression analysis is not required in this case, as connection between the indicators is very weak, and their close connection is logical. Therefore, the scenario of digital modernization that is connected to innovative development of only hi-tech spheres of economies of African countries, will not allow ensuring the systemic effect, connected to growth of their global competitiveness and sustainable development.

The most preferable scenario of participation of African countries in the Fourth industrial revolution is the alternative scenario, which envisages neo-industrialization (transition to Industry 4.0 of all spheres of economy). For quantitative characteristics of scenarios with the help of statistical indicators we use regression dependencies of indicators $y_1,y_2,x_1,x_2,x_3,x_5,x_6,x_7,x_8$ on indicator x_4. Though these dependencies are not statistically significant at the level $\alpha=0.05$ they allow for assessment of the change of the statistical indicators in case of increase of the level of innovative development of African countries (Figure 6).

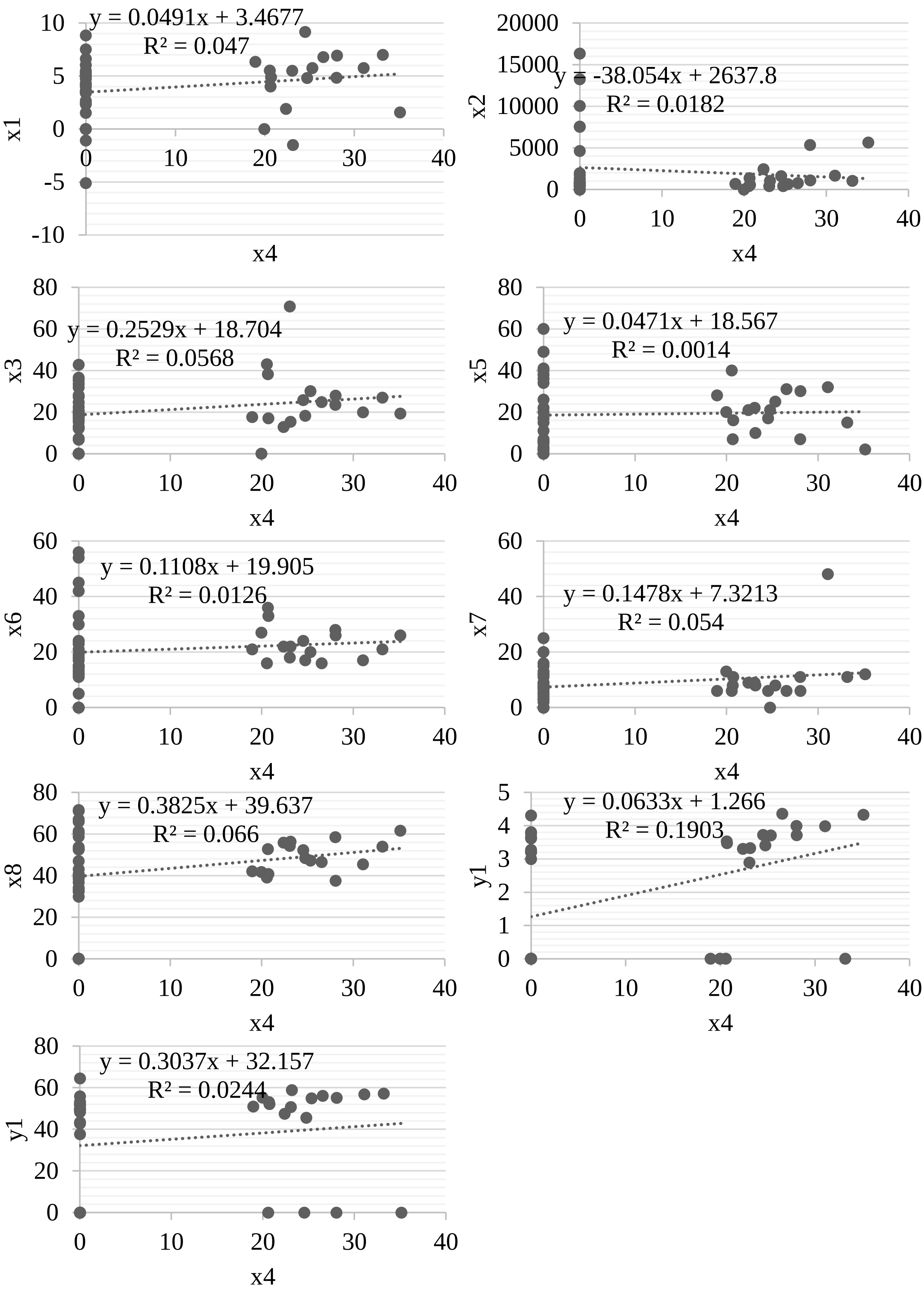


Figure 6. Regression Curves that Reflect Dependence of the Statistical Indicators on the Level of Innovative Development of African Countries in 2018.

Source: calculated and compiled by the authors.

Let us put the values of the indices of innovations into the obtained models of paired linear regression. Within the scenario of digital modernization the value of this index will be close to the level of developing countries (33.16 points), and within the scenario of neo-industrialization to the level of developed countries (59.86 points). The following characteristics of the alternative scenarios of African countries' participation in the Fourth industrial revolution were obtained (Table 7).

Table 7. Characteristics of the alternative scenarios of African countries' participation in the Fourth industrial revolution until 2030.

Indicators	Value in 2018	Values of the indicators within the alternative scenarios of African countries' participation in the Fourth industrial revolution					
		Scenario of digital modernization			Scenario of neo-industrialization		
		value	growth (absolute)	growth, %	value	growth (absolute)	growth, %
Innovations index points	25.06	33.16	8.10	32.32	59.86	34.80	138.87
Growth rate of GDP in constant prices, %	4.34	5.10	0.76	17.42	6.41	2.07	47.62
Share of agriculture, %	20.93	20.13	-0.80	-3.83	21.39	0.46	2.18
Share of industry, %	23.08	23.58	0.50	2.16	26.54	3.46	14.98
Share of manufacturing, %	10.13	12.22	2.09	20.65	16.17	6.04	59.61
Share of service sphere, %	48.90	52.32	3.42	7.00	62.53	13.63	27.88
Total volume of investments, % of GDP	23.87	27.09	27.09	113.49	33.84	33.84	141.78
GDP per capita, USD	2,496.31	1,375.93	-1,120.38	-44.88	359.89	-2,136.42	-85.58
Global competitiveness index, points	3.59	3.37	-0.22	-6.27	5.06	1.47	40.81
Sustainable development index, points	51.48	42.23	-9.25	-17.97	50.34	-1.14	-2.22
Essence of the scenario	-	selective innovative development, limited by hi-tech spheres of industry			systemic innovative development of economy with the infrastructure-building role of industry		
Existing experience of scenario realization	-	developing countries			developed countries		

Source: calculated and compiled by the authors.

The data from Table 7 show that within the scenario of digital modernization the value of the global competitiveness index of African countries reduces as compared to the 2018 level, and within the scenario of neo-industrialization increases by 40.81%. However, GDP per capita reduces within both scenarios – as well as the sustainable development index – as forecasting was conducted with all other conditions being equal. For preventing the reduction of the values of these indicators it is necessary to take special measures within the model of neo-industrialization.

Africa 4.0 as the Optimal Scenario: Policy Implications

The following conceptual model of Africa 4.0 was developed (Figure 7). It takes into account the specifics of African countries that are connected to contradictory influence of innovative development of their economies on global competitiveness (positive, direct influence) and on sustainability of their development (negative, reverse influence) (Figure 7).

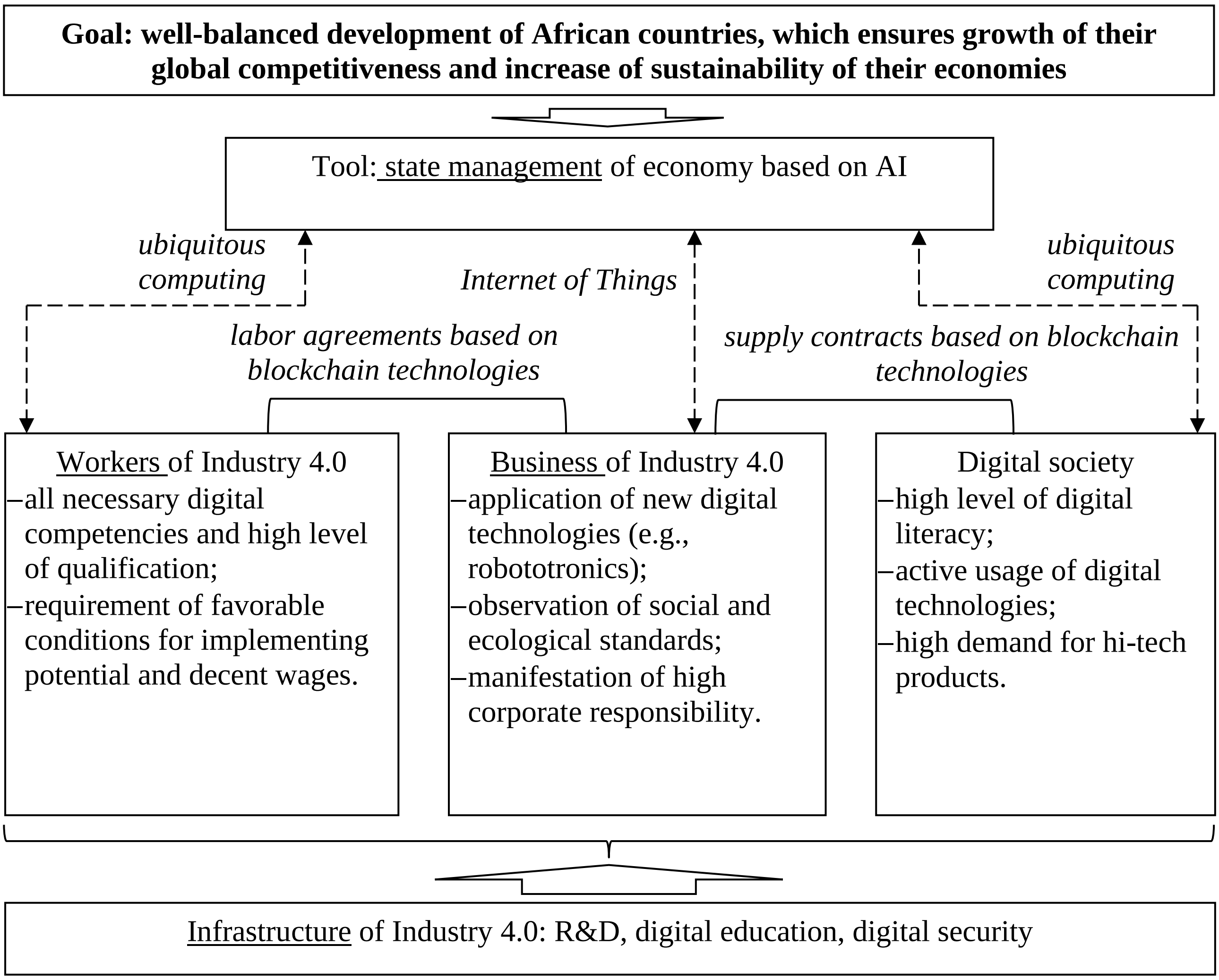


Figure 7. The conceptual model of Africa 4.0.

Source: compiled by the authors.

As is seen from Figure 7, the offered model is aimed at well-balanced development of African countries, which ensures growth of their global competitiveness, and increase of sustainability of their economies. The tool of implementing the set goal is state management of economy on the basis of AI. The basis of economy is Industry 4.0 – production, distribution, and consumption with the usage of new digital technologies. It is based on specialized infrastructure – R&D that is aimed at creation and adaptation of new digital technologies to various economic operations, digital education, which allows developing digital competencies and ensures high level of qualification of the employees of Industry 4.0, and digital security, which ensures loyalty (trust) of business and society to digital technologies.

The central subject of economy is business of Industry 4.0, which specific features are application of new digital technologies (e.g., robototronics), observation of social and ecological standards, and manifestation of high corporate responsibility. State management of business is automatized on the basis of the Internet of Things. Another subject of economy is employees of Industry 4.0, who possess all necessary digital competencies and high level of qualification and set requirements of favorable conditions for implementing the potential and decent wages. Their labor relations with business have the contractual basis with the help of blockchain technologies, which allow preventing the development of the shadow economy.

A subject of economy is also the digital society (consumers), which specific features are high level of digital literacy, active usage of digital technologies, and high demand for hi-tech products. Their relations with business (connected to products supply) also have the contractual basis with the help of blockchain technologies, which allow preventing the development of the shadow economy. State management by the employees and society (consumers) is automatized on the basis of ubiquitous computing.

The following algorithm has been developed for successful and crisis-free neo-industrialization of African countries based on breakthrough technologies of Industry 4.0 (Figure 8).

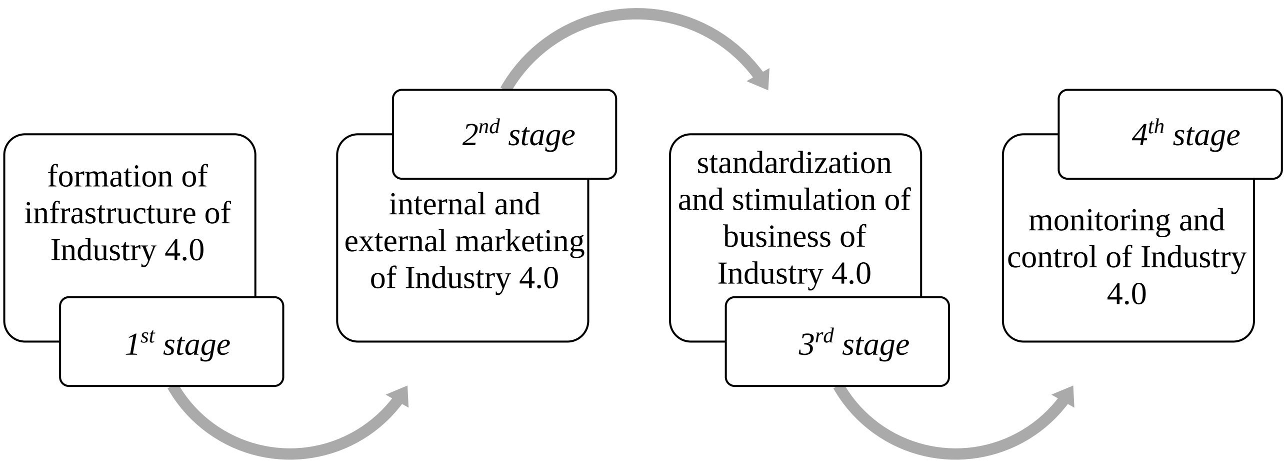


Figure 8. Algorithm of neo-industrialization of African countries based on breakthrough technologies of Industry 4.0.

Source: compiled by the authors.

As is seen from Figure 8, the offered algorithm is implemented in four consecutive stages. The first stage envisages formation of the infrastructure of Industry 4.0 via modernization of the system of science and education and development of the system of provision of digital security. The second stage envisages internal and external (global) marketing of Industry 4.0 of African countries for formation of demand for their hi-tech products.

The third stage envisages standardization (adoption of social and ecological standards) and stimulation (e.g., tax) of business of Industry 4.0, which value should depend on the level of corporate social and ecological responsibility. The fourth stage envisages monitoring and control of achievement of the set goals. It is offered to use the estimate (planned) values of the indicators of socio-economic development of African countries until 2030 within this scenario.

CONCLUSION

Thus, as a result of the research it is determined that the perspectives of involvement of African countries in the global Fourth industrial revolution based on breakthrough technologies of Industry 4.0 are connected to their neo-industrialization. This scenario envisages full-scale transition to economies of African countries to Industry 4.0 and is preferable (as compared to selective digital modernization in the sphere of hi-tech spheres of industry), as only it allows increasing the level of innovative development of economies of African countries, which is necessary for growth of their global competitiveness.

An important specific feature of African countries, which differentiates them from developed and developing countries in other regions of the modern global economy, is contradictory influence of innovative development on their economies, which stimulates the growth of its global competitiveness with simultaneous reduction of sustainability of development. That’s why in this work the model of neo-industrialization, which is implemented by the modern developed countries, is adapted to the determined specifics of African countries.

This model envisages standardization and stimulation of corporate social and ecological responsibility of business of Industry 4.0. This will allow achieving growth of global competitiveness and increase of sustainability of development of economies of African countries until 2030. The offered model is to be implemented in stages according to the specially developed algorithm, which allows preventing a crisis of production and social and ecological crisis in African countries in the process of their neo-industrialization.

It should be concluded that the level of differentiation of socio-economic development of African countries is rather high. That’s why the model neo-industrialization of these countries is inexpedient. It is recommended to adapt the offered conceptual model of Africa 4.0 to the national specifics of separate African countries for maximization of the effectiveness of its practical application.

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US-CHINA TRADE WAR: MAKING AMERICA GREAT AGAIN OR A SYMBOLIC DECLINE OF AN EMPIRE?

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ABSTRACT: *This paper navigates into the contemporary U.S.-China trade war with the aim to examine the causes, impact on both sides and on the global environment. The paper also analyses the ambiance of the U.S. global influence especially from the perspective of Trump's or its paradox of a declining empire, which seemed to be reason why the united states wages trade war not only against China, Mexico, Canada and a host of other nations. From the application of a library research, findings show that, a trade war would have very serious repercussions all over the world; It could derail the current global economic expansion and cripple American businesses that depend on business with China. It could also further complicate geopolitical priorities. The paper concludes that, as the two biggest economies in the world, the trade war will definitely lead to great economic incongruity from both sides, but ensures more progress for Chinese economy and waning of American economic strength and global influence. The paper recommends that the US and China should find a safe landing for a better resolution of the ongoing trade war as it may affect the global economy in general, among other things.*

KEYWORDS: U.S-China, Trade War, Make America Great Again, Empire, Donald Trump

INTRODUCTION

On March 8, 2018, the US President Donald Trump announced imposing additional tariffs on China's export of steel and aluminum to USA. On March 22, 2018, President Trump announced plans to enact sanctions against China over its Intellectual Property Rights (IPR) policies that negatively affect the US stakeholders. These sanctions included raising tariffs by 25 percent on selected Chinese products valued at $50 billion to $60 billion (Oxford Economics, 2017). On April 1, China announced that it had retaliated against the US action by raising tariffs on various American products, such as pork. On April 3, the US administration unveiled a list of 1,333 products worth $50 billion in trade to which it intended to apply a 25 percent tariff.

These Chinese goods are in strategic sectors such as information technology, robotics, advanced rail and shipping, new energy vehicles and high-technology medicine and health care. A few hours later, China released its proportional response: 25 percent tariffs on 106 products, also worth $50 billion in trade (Oxford Economics, 2017). Thus, there is a tit-for-tat action going on between China and the US. The Trump administration's plans to tax $50 billion worth of Chinese imports was met with threats by the Chinese to subject $50 billion worth of American products to the same. China threatened to retaliate with tariffs on American cars, chemicals and other products. The 106 goods, many produced in parts of the country that have supported President Trump, were selected to deliver a warning that American workers and consumers would suffer in a protracted standoff (Oxford Economics, 2017).

Under the World Trade Organisation (WTO) rules, a developing country is entitled, to a certain extent, to use non-market practices to spur economic development. Since it became an economic power house trailing only the US, developed countries want China to follow the same rules and responsibilities as a market economy. So far, China's government has reacted to new tariff actions by the Trump administration with relatively restrained words and promises of proportional responses to the American government's actions. The actual intention behind the Trump administration's recent series of anti - China moves goes beyond this rhetoric. It has two aspects (Oxford Economics, 2017):

i. Forcing Beijing to open its market further for US goods and services and providing US companies with more favourable investment conditions

ii. Curbing the state-backed high-tech sectors that form the core of Beijing's 'Made in China 2025' strategy.

The US and China are the two biggest economies in the world. A trade war would have very serious repercussions all over the world. It could derail the current global economic expansion and cripple American businesses that depend on business with China. It could also further complicate geopolitical priorities given the Trump administration has enlisted the help of the Chinese in solving the crisis with North Korea.

The US-China trade rose rapidly after the two nations re-established diplomatic relations in January 1979, signed a bilateral trade agreement in July 1979 and provided mutual most favoured nation (MFN) treatment, beginning in 1980. In that year (which was shortly after China's economic reforms began), the total US-China trade (exports plus imports) was approximately $4 billion. In 2017, the total US merchandise trade with China was $636 billion, making China the US' largest trading partner (Guntram, 2018). The US merchandise exports to China in 2017 were $115.6 billion. China was the third-largest US merchandise export market after Canada and Mexico. China was the second-largest US agricultural export market in 2017, at $19.6 billion, 63 percent of which consisted of soybeans. The top merchandise US exports to China in 2017 were:

i. Aerospace products (mainly civilian aircraft and parts)

ii. Oil seeds and grains (mainly soybeans)

iii. Motor vehicles

iv. Semiconductors and electronic components

v. Waste and scrap

Many trade analysts argue that China could prove to be a much more significant market for US exports in the future. China is one of the world's fastest growing economies. Healthy economic growth is projected to continue in the years ahead, provided that it implements new comprehensive economic reforms.

China's goals of modernizing its infrastructure, rebalancing the economy, upgrading industries, boosting the services sector and enhancing the social safety net could generate substantial new demand for foreign goods and services.

Economic growth has improved the purchasing power of Chinese citizens considerably, especially those living in urban areas along the east coast of China.

In addition, China's large foreign exchange reserves (at $3.1 trillion as of December 2017) and its huge population (at 1.39 billion) make it a potentially enormous market. To illustrate (Simon, 2018):

i. A January 2017 study prepared by Oxford Economics for the US-China Business Council estimated that in 2015 US exports of goods and services to China plus bilateral Foreign Direct Investment (FDI) flows directly and indirectly supported 2.6 million US jobs and contributed $216 billion to US GDP. The study further predicted that US exports of goods and services to China would grow from $165 billion in 2015 to over $520 billion by 2030.

ii. In 2016, Chinese visitors to the US totaled 3.0 million, ranking China as the fifth largest source of foreign visitors to the US. Chinese visitors spent $33 billion in the US in 2016 (including on education), which was the largest source of visitor spending in the US. The US Department of Commerce projects that by 2021, Chinese visitors to the US will total 5.7 million.

iii. As of June 2017 China has the world's largest mobile phone network with 1.36 billion mobile phone subscribers and the largest number of internet users at 751 million.

iv. China's online sales in 2016 totaled $752 billion (more than double the US level at $369 billion).

v. Boeing Corporation delivered 202 planes to China in 2017 (26 percent of total global deliveries), making it Boeing's largest market outside the US. Boeing predicts that over the next 20 years (2017-2036), China will need 7,240 new airplanes valued at nearly $1.1 trillion and will be Boeing's largest commercial airplane customer outside the US.

vi. General Motors (GM) reported that it sold more cars and trucks in China than in the US each year from 2010 to 2017. The US motor vehicle exports to China were $8.3 billion in 2016, making it the second-largest US motor vehicle export market after Canada.

vii. According to estimates by Credit Suisse (a global financial services company), China overtook the US in 2015 to become the country with the largest middle class at 109 million adults (with wealth between $50,000 and $500,000); the US level was estimated at 92 million. A study by the Brookings Institute predicts that spending by China's middle class will rise from $4.2 trillion in 2015 (12 percent of global total) to $14.3 trillion (22 percent of global total) in 2030 (Nan, 2018:65).

LITERATURE REVIEW

According to Nan (2018:69), China was the largest source of US merchandise imports in 2017, at $506 billion. China's share of total US merchandise imports rose from 8.2 percent in 2000 to 21.6 percent in 2017. The top five US imports from China in 2017 were communications equipment, computer equipment, miscellaneous manufactured commodities such as toys and games, apparel and semiconductors and other electronic components. Throughout the 1980s and 1990s, nearly all the US imports from China were low-value, labour intensive products, such as toys and games, consumer electronic products, footwear and textiles and apparel. However, over the past few years, an increasing proportion of US imports from China are more technologically advanced products. According to the US Census Bureau, the US imports of "advanced technology products" (ATP) from China in 2017 totaled $171.1 billion. Information and communications products were the largest US ATP import from China. ATP products accounted for 33.8 percent of total US merchandise imports from China.

Some see the large and growing US trade deficit in ATP with China as a source of concern, contending that it signifies the growing international competitiveness of China in high technology. Others dispute this, noting that a large share of the ATP imports from China are in fact relatively low end technology products and parts, such as notebook computers, or are products that are assembled in China using imported high technology parts that are largely developed and/or made elsewhere (Nan, 2018:69).

China, according to Nan (2018), is a major US trading partner in services. In 2016, China was the fourth largest services trading partner at $69.6 billion, the third largest services export market at $53.5 billion and the 11th largest source of services imports at $16.1 billion. According to data from the Bureau of Economic Analysis, the US actually ran a surplus in the services trade with China in 2017 - to the tune of roughly $38.5 billion. When you factor that surplus into the two countries' overall trade balance, the US ran a roughly $336 billion deficit with China last year - which means Trump's figure was off by about $164 billion (Nan, 2018:98).

Nan (2018) while explaining the China-U.S. trade war is of the view that, the US President, Donald Trump, has for years accused the Chinese Government of unfair trade practices, which he says puts the US companies at a disadvantage. Many other foreign leaders have agreed that China unfairly subsidizes its businesses and has at times devalued its currency to boost exports. Most countries have favoured a multinational approach to apply pressure on Beijing. While China has significantly liberalized it's economic and trade regimes over the past three decades, it continues to maintain or has recently imposed a number of state directed policies that appear to distort trade and investment flows. The US policy-makers and stake holders have expressed concern that China does (Nan, 2018:98):

i. Extort or steal its rivals' intellectual property.

ii. Pursue industrial policies aimed precisely at creating advantages for many designated key sectors of its economy over foreign competitors.

iii. Limit exports of critical commodities like rare earths to give its own producers advantage on rival non-Chinese companies to move operations to China.

iv. Subsidize massive overcapacity in goods like steel and aluminum in order to undercut the competition globally.

v. Place many restrictions on foreign providers of farm products along with banking, insurance, telecommunications, Internet related, audiovisual, express delivery, legal and other services.

vi. Sue its trade partners in the WTO simply because they're exercising their right to bring actions against China.

vii. Remain determined to keep foreign firms in the dark about the regulations concerning licensing and operating requirements; product, investment, business expansion approvals and business license renewals.

Alan (2018) has reported in his writing that, the office of the US Trade Representative provided that the tariff targets were developed using a computer algorithm designed to choose products that would inflict maximum pain on Chinese exporters, but limit the damage to the US consumers. The tariff list proposed by the US focused on technology parts and components — such as printed circuit assemblies, transistors and semiconductor devices — instead of finished goods like mobile phones or computers. That meant the US consumers may not experience a significant rise in the price of imported electronics goods from China. When it came to technology, both the US and the Chinese markets were 'incredibly intertwined' and that meant the countries could not walk away from each other (Alan, 2018:94).

In the writings of Steven (2018), the tariffs could backfire because they could make it harder for American companies to sell goods overseas if other nations retaliate. A number of US agriculture firms have warned that they could be caught in the middle of a trade war, particularly if Trump follows through on threats against China and Mexico. The National Pork Producers Council said in late March that its members exported $1.1 billion of pork to China last year, making it the third-largest market. In addition to pork, the new tariffs from the Chinese Government would include US exports of apples, oranges, almonds, pineapples, grapes, watermelons, cranberries, strawberries, raspberries, cherries and a host of other items (Steven, 2018:99).

Many US firms view participation in China's market as critical to their global competitiveness. The US imports of lower cost goods from China greatly benefit the US consumers. The US firms that use China as the final point of assembly for their products, or use Chinese made inputs for production in the US, are able to lower the costs of their products. Most U.S. imports from China are not a threat to the US national security. These imports include cheap Chinese products such as apparel, toys, furniture, and consumer electronics upon which lower income Americans rely. They consist of more than 40 per cent of China's exports to the US. This also applies to most US exports to China, including copper, pulpwood, plastic materials, logs and lumber and medical equipment. Together, these products add up to 12 percent of the total U.S. exports to China. The USA can and should continue to buy these products from China and vice-versa. Both countries could source these goods elsewhere but would face higher prices for doing so (Steven, 2018:106).

Many of the targeted products are consumer goods such as televisions and dishwashers. When a large country such as the US imposes tariffs, the pain is shared between consumers who pay higher prices and producing firms abroad who have to absorb lower profit margins. Tariffs are a very poor instrument for punishing China for any unfair trading practices. Some of the cost will be borne by (Steven, 2018:106):

i. American consumers.

ii. American firms that either produce in China or use intermediate products from China.

iii. Firms in countries (mostly US allies) that supply China.

iv. Chinese firms (mostly private ones).

The same analysis can be applied to Chinese retaliatory tariffs. Chinese consumers will pay more for soybeans and products like pork that rely on soybeans. Chinese airlines will be less productive if they cannot buy American aircraft. It happens that these US exports have mostly domestic content, so that most of the pain felt by producers will be within the US. There are some sectors in which China's exports consist primarily of domestic value-added. These tend to be old industrial sectors. In textiles, for example, 75 percent of value added is really 'Made in China'. If Washington wants to limit collateral damage on its own firms and third countries, then it makes sense to go after an old sector like textiles (Steven, 2018:115).

The 15-year-old joint venture between General Motors (GM) and Shanghai Automotive Industrial Corporation has resulted in GM's selling more vehicles today in China than it does in America. This has been great for GM's bottom line. This has also increased the probability that China will soon have its own global auto that will compete head-to-head with GM inside and outside China. The American firms would (Steven, 2018:106):

i. Like to have unfettered access to the Chinese market.

ii. Prefer not to have to enter joint ventures with Chinese firms.

iii. Worry that 'tech transfer' in China sometimes takes the form of intellectual property theft.

Some experts feel overall; tariffs are the wrong instrument to address the US-China trade issues. Tariffs will cause a lot of unnecessary pain for consumers and third countries, not to mention American firms caught in the crossfire. The issues are complex. The US is an advanced industrialized economy that relies on liberal, free market principles to spur innovation and grow the economy. In contrast, China seeks to occupy a similar position in global commerce, but through a managed economy led by national champions, often state owned enterprises and a top-down industrial policy. While there are missing nuances in this characterization, this fundamental difference should be the starting point for any level-headed approach to addressing the dispute (Steven, 2018:106).

In a literature provided by Brookings Institution Analysis (2019), 15 Nobel laureates signed an open letter warning the Trump administration that "new tariffs in response to trade imbalances" would harm workers across the country, much like protectionist measures did in the 1930s. Today Washington depends far more on trade, supply chains and globalization than it did over three quarters of a century ago. The Brookings Institution Analysis (2019) also estimated that there are "some 2.1 million jobs in the 40 industries that produce products now slated for Chinese retaliation." If Washington and Beijing proceed with reciprocal impositions of tariffs, an even more recent study concludes, nearly 134,000 Americans would lose their jobs, and American farmers' net income would fall by 6.7 percent (Steven, 2018).

FINDINGS AND DISCUSSION

In understanding the rising nature of China and the declining nature of the United States as it relates to economic rise and having global influence, Philippe (2018) has posited that, in 1990, China's gross domestic product ranked only the eleventh, lagging behind not only the US, Japan, Germany, France, UK, Italy, Canada and Spain, but also two developing countries, Iran and Brazil. By 2010, China rose to number two, next only to the United States. China's rapid economic growth has been attributed to (Philippe, 2018:31) the following:

i. The Chinese Government's reform measures, which ranged from the introduction of the household responsibility system in place of collective organizations in agriculture and the rise of township and village enterprises in the 1980s.

ii. Privatization and incorporation of state-owned enterprises in the 1990s.

iii. Massive inflow of foreign direct investment.

However, these are not uncommon in the rest of the world. These are found more or less in almost all other developing countries, but none of these countries has experienced economic growth as fast and enduring as in China. Economic factors alone cannot fully explain China's rapid economic expansion in the past or the sharp power it has developed outside the country. The reasons behind China's rise as a global power may be due to China's history and culture, which work together to influence the behaviour of the people and government in China in their pursuit of personal well-being or the national goal of economic growth.

Specifically, there are five factors (Philippe, 2018:31):

i. Immense size of China's population and market.

ii. The homogeneity of its society and its ethnic composition.

iii. The secularized values of its people.

iv. The abundance and high quality of its human capital.

v. The intervention and strategizing of the state that combine to propel and sustain China's economic growth.

What is unique to China is that all these five factors exist there simultaneously, and all of them have their roots in Chinese cultural traditions or historical legacies before the Communist Revolution in 1949. China's huge population and the immensity of its domestic market allow for the growth of all sectors of manufacturing and the emergence of thousands of industrial clusters throughout the country. These, coupled with the abundant supply of a well-educated, hardworking labour force and the unusual stability of a homogeneous society, explain China's unparalleled attractiveness to investors home and abroad. The central government's implementation of long term growth plans and its massive investment in infrastructural networks further contribute to China's global competitiveness. It is the functioning of all these factors that propels the phenomenal growth of the Chinese economy (Philippe, 2018:31).

The American View and Attitude towards the Trade War

In the writings of Alan (2018) the US Government's grievances centre on the Chinese trade practices impacting technology transfer, intellectual property and innovation. The Trump Administration's Section 301 Report identifies four areas of specific concern, which are summarized below (Alan, 2018:65):

i. China has an unfair regime of forced technology transfer, implemented through formal and informal practices and policies. Through foreign investment restrictions, US companies seeking to operate in China are made to engage in a joint venture with a Chinese partner, most often a state owned enterprise. In selected sectors, such as aerospace and information technology, Chinese regulations require that the Chinese enterprise maintain the controlling interest in the joint venture.

ii. Forced technology transfers occur through discriminatory licensing restrictions under the Chinese technology import-export regulations. Chinese companies are able to "free ride" on their US counterparts' research and development in virtually any imported technology transfer arrangement.

iii. The Chinese Government directs and unfairly facilitates the systematic investment in and acquisition of, US companies and assets by Chinese companies, as a means of obtaining intellectual property and generating large scale technology transfer in industries deemed important by state industrial plans. The 'Made in China, 2025' programme blunts US innovation and corrodes its distinct competitive advantage.

iv. Over a decade, the Chinese Government has conducted and supported cyber intrusions into US commercial networks targeting confidential business information held by US firms. Through these cyber intrusions, Beijing has gained unauthorized access to a wide range of commercially valuable business information, including trade secrets, technical data, negotiating positions and sensitive and proprietary internal communications (Alan, 2018:65).

Chinese View and Attitude towards the Trade War

China is a hard-nosed global player, pursues its national interest vigorously. They've taken a non-ideological approach to economics over the last few decades, picking market based tools and government policies to their advantage. China's Ministry of Commerce made the Chinese position very clear. It said, "We do not want to fight, but we are not afraid to fight a trade war. The Chinese side will follow suit to the end and will not hesitate to pay any price and will definitely fight back. It must take a new comprehensive response and firmly defend the interests of the country and the people (Philippe, 2018:37)." There is a school of thought that the new tariffs will hardly send China into an economic tail-spin. China's more than $13 trillion economy exported $2 trillion in 2016. The tariffs will adversely affect some businesses and industries, but their total value (25 percent of between $50 billion and $65 billion) represents only about 2.5 percent of China's overall exports to the US. China is at the end of the Asian supply chain. Many of the goods it exports, particularly consumer goods, contain a substantial amount of intermediate products from elsewhere in the region that Chinese companies then assembled into a finished product (Philippe, 2018:41).

China has been making a concerted and successful push to reduce its dependence on trade; the share of total exports in its gross domestic product fell from over 30 percent in 2007 to under 20 percent last year. During that same time, the share of exports to the US fell from approximately 9 percent of China's economy to just over 4 percent. If Beijing concludes that trade tensions with Washington are likely to stay, and perhaps even intensify, it may well take steps to accelerate that trend (Philippe, 2018:43). China plays the globalization game by what we might call Bretton Woods rules, after the much more permissive regime that governed the world economy in the early post-war period. China's practices are not much different from what all advanced countries have done historically when they were catching up with others. One of the main US complaints against China is that the Chinese systematically violate intellectual property rights in order to steal technological secrets. In the nineteenth century, the US was in the same position in relation to the technological leader of the time, Britain, as China is today vis-à-vis the US. And the US had as much regard for British industrialists' trade secrets as China has today for the American intellectual property rights (Philippe, 2018:31).

China retaliated by putting tariff of $13.7 billion worth of soybean imports, alongside a little over $3 billion in cotton, sorghum, wheat and corn. China's decision to play its biggest card — soybean imports — is risky. The country accounts for 60 percent of global soybean imports. It receives the majority from two sources - Brazil and the US. The Chinese market is important for the American soybean growers, these exports are vital in helping contain food price inflation in China, since these crops are widely used to feed the livestock that satisfy the country's soaring appetite for beef and pork. Though China cannot fully replace the US as a source of soy, it can take several steps to mitigate the impact. China is likely to increase imports from Brazil, increase domestic production and use of domestic stocks and start using alternative feed sources like corn. The US is likely to be able to withstand most of the restrictions without significant shortages or pricing impacts. However, given that China can use subsidization to account for rising import costs, Beijing is in a stronger position than Washington is when it comes to this specific tariff (Cathleen, 2018:76).

China already has outlined a strategy to respond in the WTO while also targeting politically sensitive US exports that would squeeze Trump's support base. In February, China opened an investigation into the alleged US farm subsidies for sorghum production. The country's government also has raised the possibility of targeting other agricultural exports, including pork and soybeans, for investigations that could hurt business in states such as Iowa, Nebraska, Indiana and Missouri which are traditional Republic strongholds. Reports have circulated in the Chinese state media that Beijing may drop aircraft orders from the US aerospace firm Boeing Co. in favour of France's Airbus. China included narrow-body aircraft but not wide-body aircraft in its retaliatory tariffs. Only two companies in the world make wide-body planes: Boeing and Airbus. If China put a tariff on planes from the American Boeing but not the European Airbus, it would lose leverage with Airbus with which to extract favourable prices and access to cutting edge technology. China has imposed tariffs on the easy stuff: luxury goods like American wine and liquor and agricultural goods that are considered luxuries within China, like almonds and pistachios.

Through Geopolitical Actions

China could try to raise the temperature in the dispute by installing more military equipment on the artificial islands that it has recently built across the South China Sea. China could also step up pressure on Taiwan. Not likely at this stage, as posited by Prasad (2019), an economist at Cornell University who studies Chinese economic relations. Prasad wrote:

> "One of the very important tools that the Chinese have is the ability to make life difficult for a large number of American businesses. They have all of these unconventional weapons that are not covered by traditional trading rules that could be potent weapons in actually fighting a trade war. American automakers who make cars in China might find their local joint venture partners squeezing them out. Regional governments might send safety inspectors to plants of American companies so often as to disrupt production" (Cathleen, 2018).

Cathleen (20180 believes that American companies do significant business in China that doesn't show up in trade data. When Apple assembles an i-Phone in Zhengzhou and sells it in Shanghai, that doesn't count as international trade, though the profits accrue to the benefit of the California based company. The Chinese Government has any number of tools to try to weaken that business if it wishes. It could decide that phones made by a foreign company are a national security threat or shut down plants because of minor regulatory problems (Cathleen, 2018:83). The importance of the US-China relationship is already being challenged by other players. Apple's i-Phone sales in China are running into competition from local Chinese manufacturers. Samsung is more than happy to fill any void that the Chinese can't deal with. Likewise, the Chinese would happily shift their trillion dollars in future aircraft purchases to Airbus, a European firm that is already building a plant in China to finish assembly of large, twin-aisle jets. As for automobiles, most Chinese would just as soon drive a Mercedes, BMW or Lexus in place of say a Ford (Cathleen, 2018:87).

The details of what China might do are speculative. Thus far, China's government has reacted to new tariff actions by the Trump administration with relatively restrained words and promises of proportional responses to the American government's actions. The tariffs won't even go into effect until after a comment period, setting up a potentially long period of lobbying and negotiation that could rein in their scope or even delay them indefinitely. But, just because matters have been calibrated thus far doesn't mean they will stay that way (Cathleen, 2018:87).

There are a number of issues that will be deferred to avoid confrontations as long as possible. Perhaps President Xi Jinping can simply wait-out the current US administration. China can play the long game better than any other country today and has proven that in any number of instances. A senior Chinese economist with close ties to the government said (Cathleen, 2018:87):

> However, there is a deal that could be struck, as both sides have a lot to lose, especially China, as we are not ready for economic warfare with such a big power as America. What scares me, and many government officials, is the rhetoric is heating up very quickly, leaving both sides very little room

> to work out a deal. Both sides are making a big mistake, as trying to score quick points for their own domestic political audiences is a big error. Now is the time to get both sides in a room, lock the doors, and work towards a deal that is fair to everyone (Cathleen, 2018:144).

Table 1: 2018, U.S. Trade in Goods with China

NOTE: All figures are in millions of U.S. dollars on a nominal basis, not seasonally adjusted unless otherwise specified. Details may not equal totals due to rounding. Table reflects only those months for which there was trade.

Month	Exports	Imports	Balance
January 2018	9,902.6	45,765.6	-35,863.1
February 2018	9,759.9	39,020.6	-29,260.7
March 2018	12,652.1	38,327.6	-25,675.5
April 2018	10,503.8	38,303.9	-27,800.1
May 2018	10,428.2	43,965.7	-33,537.5
June 2018	10,860.1	44,612.1	-33,752.0
July 2018	10,134.6	47,120.6	-36,986.0
August 2018	9,285.9	47,869.2	-38,583.3
September 2018	9,730.0	50,015.0	-40,285.0
October 2018	9,139.9	52,202.3	-43,062.5
November 2018	8,606.2	46,500.8	-37,894.6
December 2018	9,144.9	45,972.1	-36,827.2
TOTAL 2018	**120,148.1**	**539,675.6**	**-419,527.4**

Source: U.S. Department of Commerce (2019): Trade in Goods with China. The U.S. Bureau of Census.

It can be seen from the above table that the year the U.S. waged trade war against China has equally affected the United States, which is year 2018. it is discernible that U.S exports have declined in favor of China.

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Table 2: 2019, U.S. Trade in Goods with China

NOTE: All figures are in millions of U.S. dollars on a nominal basis, not seasonally adjusted unless otherwise specified. Details may not equal totals due to rounding. Table reflects only those months for which there was trade.

Month	Exports	Imports	Balance
January 2019	7,134.3	41,603.8	-34,469.5
February 2019	8,433.6	33,194.4	-24,760.8
March 2019	10,426.5	31,175.7	-20,749.1
April 2019	7,896.3	34,798.9	-26,902.6
May 2019	9,074.5	39,269.1	-30,194.6
June 2019	9,034.7	39,002.3	-29,967.6
July 2019	8,733.7	41,508.7	-32,775.0
August 2019	9,430.6	41,187.3	-31,756.6
TOTAL 2019	**70,164.3**	**301,740.3**	**-231,576.0**

Source: U.S. Department of Commerce (2019): Trade in Goods with China. The U.S. Bureau of Census.

It can be seen from the above table showing 2019 trade year between the United States and China, where American exports to China continued to dwindle and the U.S continued to import more than it exports. From this figure, Trump asserted that even the Chinese economy has been hit due to level of American imposed tariff, with China losing 3 million jobs (Wang and Xin, 2019).

Contrary to Trumps assertion, Wang and Xin (2019) have posited that China has been able to create 10.97 million jobs in spite the trade war within nine months of 2019. Wang and Xin (2019) have written in line with the above that:

> The figure comes despite the country's headline gross domestic product (GDP) growth in the third quarter slowing to 6.0 per cent, the lower end of the government's 2019 target. China's surveyed jobless rate was 5.2 per cent at the end of September, unchanged from the end of August, while its migrant workforce stayed relatively steady at 183.36 million, a slight increase from 182.48 million at the end of June.

According to Medley Global (2019), if the China-U.S. trade war is resolved, year 2020 will emerge as a year of wonderful trade surge among trading nations. In spite of fallen level of exports and imports affecting the two, and with the perpetual dialogue ongoing between the two countries' negotiators, business will improve, but that does not guarantee that the American global economic influence would not be by-passed by Chinese influence.

US Dependency on Rare Earth Metals

The US is almost entirely dependent on China specifically for rare earth metals that have been processed into a final and usable form. These metals are not actually rare, however, they are difficult to mine and process. They play crucial roles in everything from smart phones to electric car motors, hard drives, wind turbines, military radar, smart bombs, laser guidance and more. If China clamps down on these exports, it would create a panic type situation into America's supply chain for high tech consumer products and military's advanced weapons systems. China has shown its willingness to use its advantage in rare earth metals earlier in 2009. China did cut off its rare metal exports to Japan entirely after an international incident involving a collision between two ships. This was eventually resolved at WTO (Cathleen, 2018:141).

America has plenty of rare earth deposits. The problem is maintaining a domestic industry to mine the minerals and transform them into final components. Colorado-based Molycorp started mining rare earths at Mountain Pass. But, it struggled to turn a profit, and eventually went bankrupt. In the middle of last year, a bankruptcy proceeding sold the mine to another China involved consortium. The Chinese partner in the consortium, Shenghe, will have exclusive sales rights to the mined product (Cathleen, 2018:141).

China's Holdings of U.S. Treasury Securities: 2002-2017

Barry (2018) asked the question-could China use its role as No. 1 lender to exert pressure in a trade war? It would be risky maneuvers in which China itself would potentially have much to lose. But, it cannot be ruled out. If China were to suddenly unload some of its holdings, or even signal an intention to buy fewer dollar assets in the future, that would probably cause long-term interest rates in the US to rise, at least temporarily. And this would cause some pain in the US, as borrowing costs would rise. Furthermore, China needs to maintain significant reserves of the US debt to manage the exchange rate of the renminbi. Rise of currency's exchange rate would make the Chinese exports more expensive in foreign markets. It would also drive down the value of China's existing bond portfolio, meaning China could lose billions. And, it would tend to push down the value of the dollar relative to other currencies, which would actually help the US attain more advantageous trade terms. As such, China's holdings of the American debt do not provide China with undue economic influence over the US (Barry, 2018:10).

That doesn't mean there isn't room to cause some near-term pain and disruption. The Chinese have some leverage to rattle the US bond markets, even if the threat of substantive action is not very credible. Given that a trade war with such a major trading partner is without precedent in modern times, we don't really know what it would look like. But, it's a safe bet that Chinese officials are already thinking through their options in case that is where the latest round of economic saber rattling ultimately leads (Barry, 2018:16).

Reconciliation

There has been a lot of rhetoric and statements from both sides. The standard protocol in a trade dispute is: One country takes action against another country, which hits back with a proportional response and then both sides call a *de facto* truce. Neither Washington nor

Beijing's tariffs will take effect immediately. The US had laid out a roughly six to eight-week period for the tariffs to receive public comment before going into effect. China's announcement, on the other hand, did not include a date. Beijing is hoping backdoor discussions will persuade Washington to hold off on the tariffs, thus preventing the need for retaliation. China would not implement its tariffs until after the US takes action. China would adjust its decision based on what the US does. Trump has to decide whether to accept something like the deal offered by the Chinese or to proceed with the tariffs on $50 billion of imports. China then would certainly proceed with the matching tariffs on $50 billion that it has identified. It has been observed that whenever Trump or his officials talk tough on China, the US stock market falls. Whenever there is more conciliatory talk about negotiating an agreement, markets rise. This is an indication that major companies have a lot at stake in resolving the dispute, preferably with some better market access, rather than having a trade war. Also, there are a number of farmers in Trump country who have a lot to lose if exports to China are penalized. There are strong incentives for Trump to accept something like the deal offered by China and to declare victory.

China, which is worried about the health of its financial sector, appears to be willing to open up certain markets, responding to domestic concerns. Details remain in the works. Beijing already has shown willingness to make several concessions to Washington including (Jeffrey, 2018:43):

i. Reducing investment restrictions on financial, automotive and other sectors.

ii. Offering to increase the market access on restricted financial and service industries.

iii. Purchases of various US exports, such as liquefied natural gas and semiconductors.

But, China has so far been making offers that carefully align with its own domestic reform priorities. As its domestic market grows more robust, it is not likely to concede to changes that alter the foundation of its heavily state influenced economy, which is what hawkish US negotiators want most. On April 10 2018, at the Boao Forum for Asia known as ‘China Davos’, Xi Jinping made some eagerly-awaited statements in his keynote address. Some of these were (Jeffrey, 2018:43):

i. In the automobile area, in addition to the tariff reduction on cars, Beijing would permit more foreign investment in domestic auto companies and financial services and greater protection for intellectual property.

ii. International Import Expo would be held in Shanghai in November “to open up the Chinese market.”

iii. He said that China’s door of opening up will not be closed and will only open even wider.

iv. Xi reiterated a call for developed nations (US) to ease restrictions on high tech exports to China. That is not about to happen, with Washington citing national security concerns that such technologies would find their way into China’s defence industry.

v. While making no direct mention of the trade war with the US, he said a 'zero-sum' and 'Cold War' mentality looks even more out of place than ever in the modern world.

The Chinese President's speech assuaged investors' concerns about a potential trade war, at least temporarily. The overt message was that China would continue to gradually open up on its own terms and the implicit message was that American firms may lose out on the benefits if President Trump pursues the trade war. The Trump administration's trade policy team USTR Robert Lighthizer, Commerce Secretary Wilbur Ross, Treasury Secretary Steven Mnuchin, National Economic Council Director Larry Kudlow and National Trade Council Director Peter Navarro has been to Beijing to get China to commit certain actions that would enable tensions to come down. China has announced the suspension of its retaliatory tariffs, which cleverly singled out the products of the Republican farm states. Trump, on Twitter, suggested that the Chinese have "agreed to buy massive amounts of additional Farm/Agricultural Products." At least for now, he appears to have dropped, or tempered, his demands for big, structural changes in how China treats domestic and foreign companies (Jeffrey, 2018:43).

It is clear that China is willing to negotiate some modest changes in policies and purchases that Trump could take as a victory, but that they are not willing to negotiate with a gun to their head. However, China was not willing to accede to a key US demand — to stop subsidizing the 10 high tech industries targeted in the Made in China 2025 programme.

CONCLUSION

If China maintains its internal political stability and high economic growth rate, this tense transition period would continue for at least a couple of more decades. Tensions would be further aggravated if the Chinese Government believes, as some Chinese analysts claim, that the more China "rises," the harder Washington will resist. It is also notable that as the two biggest economies in the world, the trade war will definitely lead to great economic incongruity from both sides, but ensures more progress for Chinese economy and waning of American economic strength and global influence. This shows that, Donald Trump is rather aiding in the decline of American Empire, as the trade war will not lead to American economic rise, rather cripple it in all ramifications. The two parties involved (China and U.S.) must continue to engage in dialogue in order to reach agreements on healthy trade and transactions. The U.S. needs to allow for market forces to determine international trade and economic relations, with policies that are truly liberal not protectionist in nature.

RECOMMENDATIONS

1. The paper recommends that the US and China should find a safe landing process through mutual dialogue for a better resolution of the ongoing trade war as it may affect the global economy in general.
2. The United States must allow market laws and laws of demand to determine international economic relations and accepts market liberalization against economic protectionism. This will ensure trust building and proper rules of engagement between the two world largest economies.

3. The United States should accept the creed that empires rise and empires decline, and the rise of China is inevitable. It should deal with rising domestic and global challenges and cooperate with other states in dealing with multilateral dialogue on climate change, Iranian nuclear deal, trade wars and many other issues of international relevance.
4. China must consider areas of concern made by the United States and legally respond to those claims. Where shifts need to be made, China should rationally look into that, in order to eliminate mutual distrust and allow free market to flourish.
5. China must continue to pursue peaceful diplomatic relations with other states around the world with the United States inclusive, and continue to protect its interest which is an inclusive global economic growth and peaceful coexistence among states and nations.

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GEOGRAPHICAL POSITIONING AND MARKET RESOURCES IN BENIN BORDER COMMUNES

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ABSTRACT: *Space is not neutral and its dynamism depends on the activities that take place on the one hand and interactions between actors on the other. This work analyzes the dynamics of border areas across municipalities. Border municipalities are mainly characterized by strong trading networks that influence the tax base. Assuming that market infrastructures influence the tax, base and using the panel data on municipalities' revenues, the results show that the autocorrelation is not located at specific locations, such as in the municipality of Grand popo in southwestern Benin. Local self-government of municipalities is a challenge to decentralization. It is necessary to strengthen market networks, develop a more effective strategy for mobilizing and broadening the tax burden and, finally, raise the awareness of actors to learn their rights and duties by paying taxes. remains a challenge.*

KEYWORDS: Spatial Analyse, Municipalities, Correlation, Market Resources, Positioning

JEL Code: R12, R38. H25. H71

INTRODUCTION

The space is not neutral and even less economically neutral according to the work of several economists like Aydalot (1985), Hotteling (1929), Marshall (1920), François Perroux (1955, 1961). In the price, is the price and the request are a transaction in a space point. There is no economic life without space.

For Krugman (1991), the development of economics of the works, the commercial network and the industrial "These factors have been improved. Much work on the theories of endogenous growth (Romer 1986, Lucas 1988, Barro 1990) has also played an important role in transport infrastructure on economic growth. These generate externalities for the economy as a whole. Infrastructure as a measure of the economic efficiency that conditions development. The quality of infrastructure supporting the development of road or lagoon infrastructure, markets and bus stations ..., is linked to the development of trade, thus strongly determine the weight of the contribution of the border to the economy.

Trade is the main activity that takes place in a dynamic border area. The economic positioning of a territory influences its local economy. Border areas have long been of great interest in the regional analysis because the border contributes to the economic emergence of the activities carried out. It refers to the boundary that separates two national territories, with reference to all the political, social, spatial, historical and identity dimensions contained in the separation (Fouchier 1991, Grimson 2003, quoted by Poschet 2006). The border area is therefore "a spatial and social entity that implies special relations because of the existence of a border" (Poschet, 2006, p. 8). Igue (1995) distinguishes low-speed border areas, alternative border areas and national peripheries.

Border dynamics are characterized by local, demographic and economic dynamics, which induce the idea of a change through the development of a particular process (Poschet, 2006). The local dynamics of the border are based on the merchant network, which is an interconnected set of components and interrelations that allows the circulation of goods. These main components are traders, carriers and buyers. To make transactions, they rely on each other to the extent that they are all intertwined.

Border dynamics refer to activities, flows, and changes that are observed at the level of spaces with particular characteristics and geographical situations. Igue (1995) shows that the Beninese communes bordering Nigeria are very dynamic thanks to the commercial activities, the flows of people and goods and the different changes observed on these spaces.

Indeed, Benin being border with Nigeria, Burkina-Faso, Niger and Togo, the border municipalities of Benin, are the illustration. These municipalities are mostly dynamic areas because they owe their dynamism to their proximity to the border. They are a place of transit, passage and exchange of both agricultural and manufactured products from Nigeria, northern countries or manufactured in the municipality.

According to several authors, it is the national peripheries that lead to the development of dynamic border regions (Bennafla, 2003). Such dynamic border areas have developed mainly between Nigeria and its neighbors, between Ghana and its neighbors, The Gambia and Senegal, Mauritania and Senegal (Igue, 1995, 2010). Studies by Dillé (2000) on the commune of Koné in Niger, border in Nigeria; Kambale (2005) on the Kasindi area in Congo, bordering Uganda; Diallo (2006) in the municipality of Rosso Senegal bordering Mauritania; de Poschet (2006) on the border cities of Haiti and the Dominican Republic; and Igue (2010) on the Ifangni-Igolo zone in Benin, bordering Nigeria, all lead to the same conclusion.

Today, in the context of decentralization, where national development depends on the development of each municipality, a good spatial planning policy is needed for the optimal use of the local area. It is therefore important for each municipality to make the most of its potential by creating better conditions for the development of trade, a favorite activity in border areas. The dynamics of border territories is also due to several factors,poles of attraction, transit and transit points where thousands of people and goods circulate, where economic activities such as agriculture, handicrafts, trade, transport, foreign exchange (Igue, 2010, Dillé 2000, Diallo 2006).

The increase in population, which is not necessarily linked to the internal growth of the population, and is considered as the consequence of migratory movements towards localities that offer better economic opportunities. Thus, modest villages become localities of 10,000 to 20,000 inhabitants. Despite their size, these new agglomerations are mainly placing of frequentation and most traders do not live there. As a result, economic spin-offs are reflected in larger urban centers. In this way, cross-border trade primarily consolidates urban centers in the interior of the country, while exploiting border markets whose lack of permanence, stability and financial spin-off prevents the development of border areas. Peter Njikamp (2000) finds it difficult for border communities to take advantage of their long-term position unless they are able to integrate a network economy with the necessary skills.

Borders are opportunities and places of exchange, insofar as they constitute spatial discontinuities and delimit spaces often linked by culture, history, geography, currency and the economic potentialities that give rise dynamic spaces.

This work analyzes the share of the commercial networks on operating revenues and the spatial self-correlation of municipalities to deduce the best-situated municipalities that influence each other in relation to the commercial networks. We assume that revenues from the commercial networks influence the operating revenue of the border municipalities.

RESEARCH METHODOLOGY AND DATA STUDY

Research Methodology

To achieve the objectives of the study, we conducted descriptive and explanatory analyzes that verified the assumptions made.

The descriptive analysis based on Principal Component Analysis (PCA) under SPAD version 5, led to a categorization of communes according to the level of dynamism of their market network. This level is measured by the level of staffing in market and road infrastructure and by employment in the trade and transport sector.

PCA is a statistical technique of multidimensional analysis of data of quantitative variables. It leads to approximate graphical representations of the contents of a data table and seeks to identify the similarities and differences between individuals with respect to the variables chosen.

The explanatory analysis was based on an econometric estimation of the level of operating revenue in the Benin border communes and the level of revenue from the merchant network in these communes in order to determine the explanatory variables for each of them. There are 36 border municipalities in Benin. Regardless of the municipality, operating revenue consists of receipts from the merchant network (RRM), other services, taxes and duties (PSIT), subsidies for the economy. Central State for the operation of these communes (SEFC) and other elements. The level of the components of operating revenue thus determines the level of the latter. This relationship can be econometrically established as follows:

$$\ln(RF_i) = \beta_0 + \beta_1 \ln(RRM_i) + \beta_2 \ln(PSIT_i) + \beta_3 \ln(SEFC_i) + \varepsilon_{1i} \qquad \text{(i)}$$

ln is the logarithm neperien and ε_{1i} the error term.

The estimation of this model allows us to verify the first hypothesis according to which the revenues of the merchant network have a positive influence on the operating revenue of the border communes of Eastern Benin.

In Fourth Meetings of Theo Quant: Besancon, February 11 and 12, 1999 by Presses Universitaires Franc-Comtoises (2001), on the basis of the study on the effects of the national road network on the departmental economic development in France, Bernard Fritsch establishes a relationship between the national network and levels of economic development.

This relationship leads us to consider that departmental levels of market production are a function, on the one hand, of departmental endowments in private factors of production (productive capital of the market sectors and employment), on the other hand of the national network; and that with equal allocations to private production factors, two departments with differences in their road equipment will have dissimilar levels of activity. This level of departmental commercial activity has been modeled as an aggregate production function, of the type:

Y = f (K, L, Rn), with:

Y = departmental commercial GDP,

K = productive capital of market sectors,

Employment in the market sectors,

Rn = Departmental allocations on national roads and motorways.

According to the Cobb-Douglas method, in log-linear form, this model is mathematically formulated as follows:

$$\ln(Y) = a_0 + a_1 * \ln(K) + a_2 * \ln(L) + a_3 * \ln(Rn) + \varepsilon_j$$

In order to verify the second hypothesis according to which the level of endowment in road and commercial infrastructures, the nature of the border which crosses the border communes of Eastern Benin determine the level of the receipts of the merchant network, we take the same step as Bernard Fritsch. Thus, we formulate econometrically the following relation:

$$\mathbf{\ln(RRM_i) = \beta_0 + \beta_1 \ln(PL_i) + \beta_2 \ln(DSP_i) + \beta_3 \ln(TD_i) + \varepsilon_{2i}} \qquad \textbf{(ii)}$$

with:

RRM: revenue from the merchant network;

PL: patents and licenses;

DSP: parking and parking fees;

TD: customs taxes.

Indeed:

- Revenue from the merchant network (RRM) reports on the level of production of the commerce and transport sector in these communes;
- Patents and licenses (PL), paid mainly by traders in these areas, report on employment in the trade sector and the provision of market infrastructures (markets, sheds, warehouses, etc.);

- Parking and parking fees (DSP), paid by the carriers, reflect the level of employment in the transport sector and the provision of transport infrastructure;

- Customs taxes (TD), which are royalties paid to municipalities by the State, make it possible to identify the nature of the border crossing the communes.

Knowing that the dynamism of the merchant network measured by the level of staffing in market and road infrastructure and employment in the trade and transport sector can have a discriminating effect on the level of revenues of the merchant network, we had introduced into the model (ii) an indicator variable (DM) that makes it possible to segment the communes into two groups and to determine if the segmentation criterion is really discriminating. The values taken by the dummy variable are:

$$DM=\begin{cases} 1 \text{ } if \text{ } the \text{ } municipality \text{ } is \text{ } most \text{ } dynamic \text{ } merchant \text{ } network \text{ } group \\ 0 \text{ } if \text{ } the \text{ } municipality \text{ } is \text{ } not \text{ } most \text{ } dynamic \text{ } merchant \text{ } network \text{ } group \end{cases}$$

Thus, the following equation (ii) becomes:

$$\ln(RRM_i)=\beta_0+ \beta_1 \ln(PL_i) +\beta_2 \ln(DSP_i) + \beta_3 \ln(TD_i) + DM + \varepsilon_{2i} \qquad \textbf{(iii)}$$

Knowing the values of the variables explained and the explanatory variables of the models (i) and (iii) for all Benin's border municipalities in Nigeria, we will estimate the values of the coefficients by multiple regression and judge their statistical significance by the Ordinary Least Squares (OLS) method. The threshold of significance used is 5% and a coefficient will be said significant when the probability associated with it is less than 0.05. Estimates are made in snapshots based on 2013 observations.

The coefficients are the elasticities of the variables explained to the different factors of production (explanatory variables). They measure the relative variation of the revenues of the market network following a 1% variation in the volume of one of the factors of production and make it possible to calculate a marginal productivity, comparable to an implicit economic rate of return of these explanatory variables.

For example, considering equation (iii), this rate of return for TD is equal to β3 * RRM / TD.

The estimation by the OLS method is based on fundamental assumptions. For this, the validation tests will be performed before interpreting the estimated coefficients. This is how the following tests will be performed:

- Test of normality of the residues: It is on this test that rests the validity of the other tests consequently the errors must follow a normal law for the validity of these last ones.

- Heteroscedasticity test of residues;

- Autocorrelation test to put us in the perfume that no bias has slipped into the estimation of the parameters.

Estimates are made under Eviews 7.

To better understand the theoretical results of our study, we went to Ifangni commune, for example, to see how the merchant network in general and the road and market infrastructures in particular.

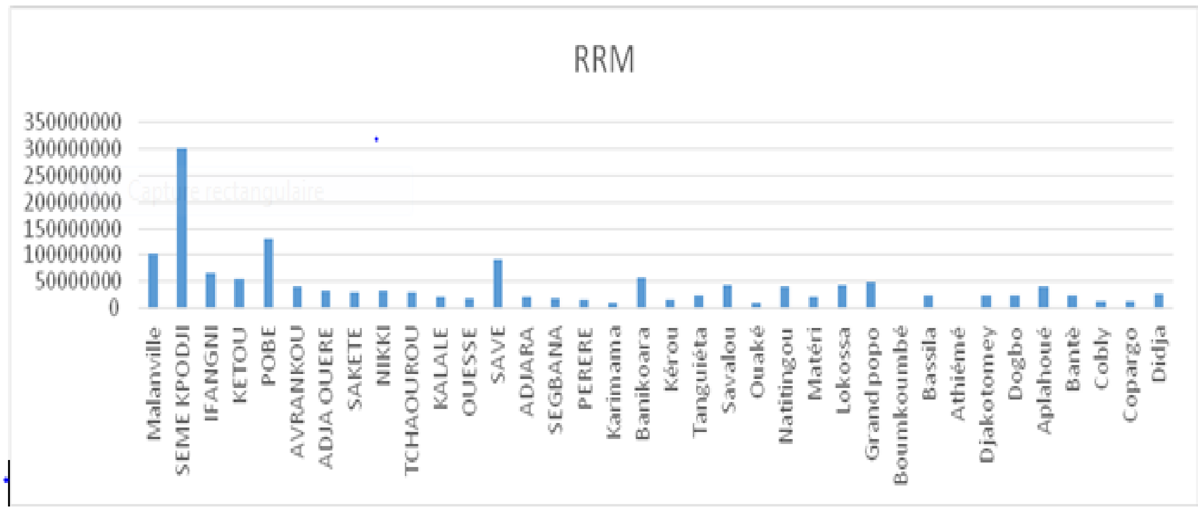
Data Study and Sources

Regional science and economic geography analyze conducted at the subnational level are often hampered by the lack of readily available data. You have to build your own databases using multiple sources. Thus, the 2013 administrative accounts of the thirty-six communes of Benin bordering Nigeria, obtained at the National Commission of Local Finance (CONAFIL), served as a basis for obtaining the data used in this study. The operating revenue was directly extracted from the administrative accounts when all the other data were obtained by summation of different data. The table below summarizes the composition of these data.

See Table 1 in Annex

PRESENTATION AND ANALYSIS OF RESULTS

Descriptive analysis



Graph 1: **Recipes of the Commercial Network of Border Municipalities of Benin in 2013**

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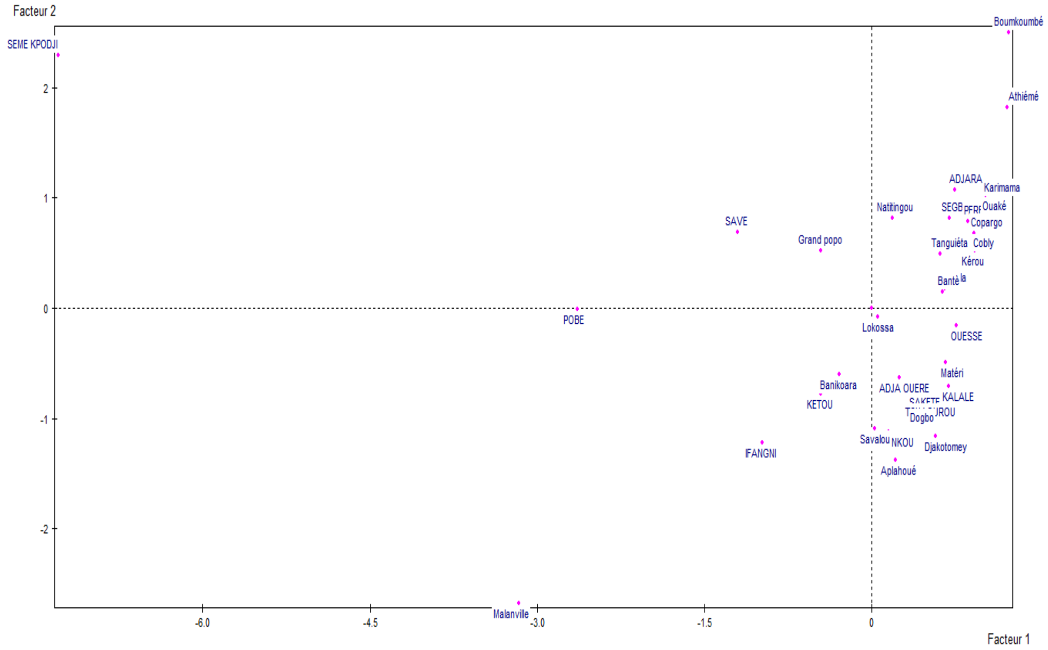


Graph 2: Categorization of Communes According to their level of Dynamism of the Merchant Network

The analysis of graph 1 shows that the municipality of Sèmè-Podji has the highest level of revenue of the merchant network. In addition, from the graph 2 we notice that the municipality of SèméPodji is the most dynamic commune

Factors Explaining the Revenue Level of the Merchant Network in the Communes

Results of Estimation Model

See Table 2 and 3 Annex

Table 2 presenting the results of the model (i) shows that this model appears correctly adjusted because the coefficient of determination (R2) is close to 1 and the critical probability of the Fisher F-statistic is less than 0.05 and even 0.01. The explanatory variables SEFC and PSIT are not significant at the 5% level. Only the RRM variable is.

See Table 4 and 5 Annex

Analysis of the data in Tables 3 and 4 shows that the variables PL, TD are significant at 5% or even 1% and that the model [2] appears correctly adjusted with a high coefficient of determination (R2) and the critical probability of the Fisher's F-statistic is less than 0.01. Only the explanatory variable DSP is not significant at the 5% level.

Results Interpretation

The revenue level of the merchant network is explained by the licenses and the customs taxes, all other things being equal. Parking and parking fees have no effect on the level of these revenues at a time when a 1% increase in licenses and customs duties, respectively, leads to an increase of 0.55% and 0.87% respectively. revenue from the merchant network

Comparison of Spatial Autocorrelation between Municipalities

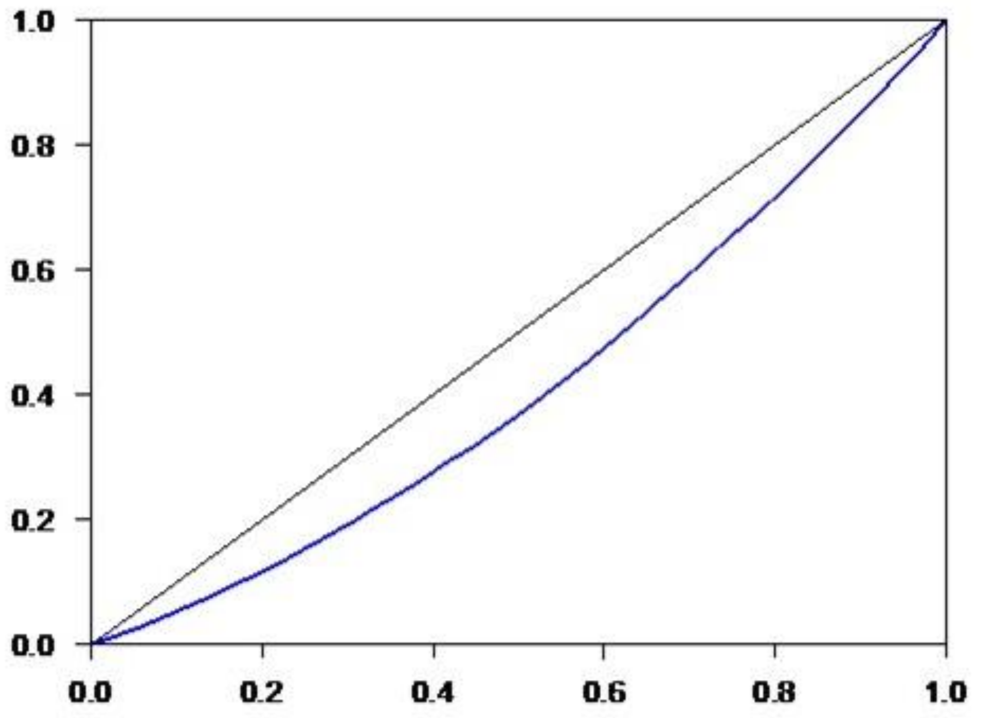
Spatial Dispersion of VAT Values at Customs Lines (TD)

See Table 6 in Annex

Coefficient of variation = 0.30 so low dispersion of values around the mean.

The low spatial dispersion of VAT collected at the customs cordon is revealed in the table. The standard deviation is 2357111 and the coefficient of variation 0.3056 remains low. This result expresses the small dispersion of the municipalities in the tax related to the customs cordon. This dispersion is characterized by the following statistics: Minimum 3078000, Maximum 12070000. 1st Qu 5902000 or 25% of the communes mobilizes the customs cordon 5 902 000 CFA francs on average, 50% of the communes mobilize 7 819 000 CFA francs for an average level of annual mobilization of customs duties of 7,711,000 CFA francs; 75% of municipalities each show a tax mobilization at the customs cordon of less than or equal to 9509000 cfa.

The GINI 0.1732309 index confirms the low dispersion of this customs tax by the border communes of the Republic of Benin as shown by the LORENZ curve.



Graphic 1: Lorenz Curve of Taxes Collected at the Customs Cordon

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Spatial Dispersion of Parking Lot Values (DSP)

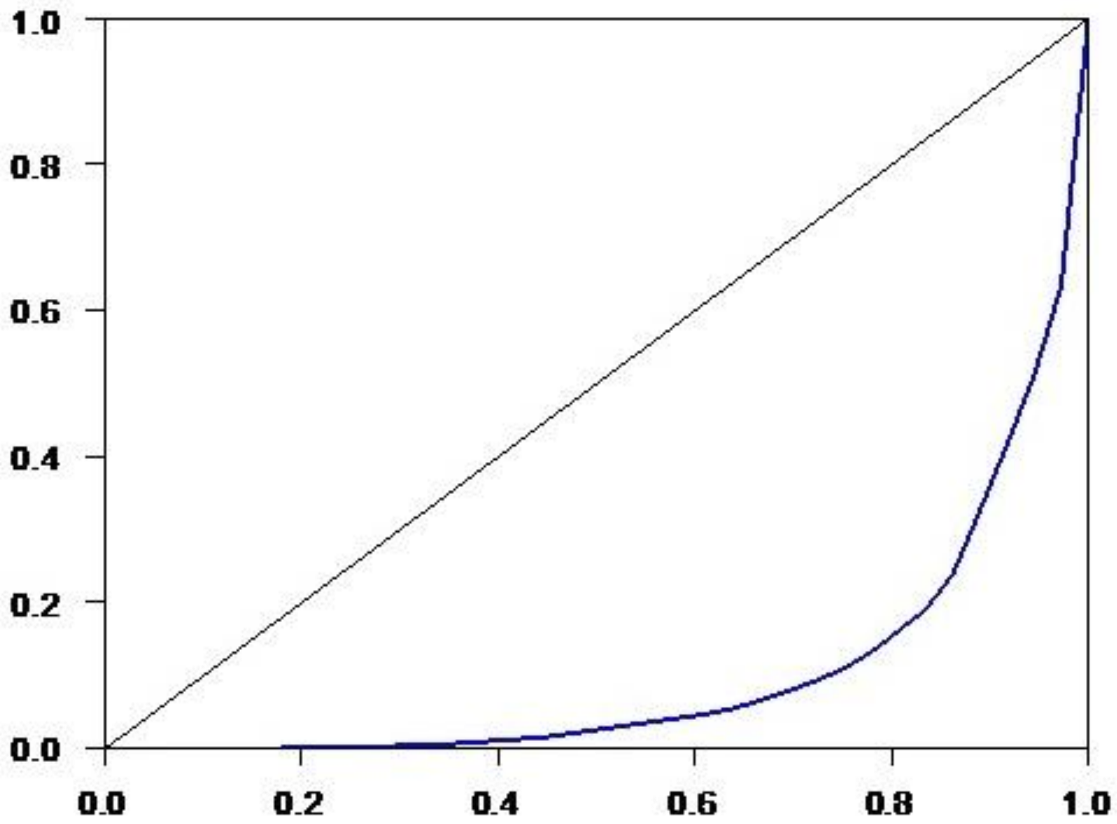
See Table 7 Annex

The coefficient of variation is high 2,36938261 and thus expresses a strong spatial dispersion of the amounts related to parking fees and parking in border municipalities in Benin.

This dispersion is characterized by a minimum of 0; there are border municipalities that could not mobilize an amount related to the parking and parking fee and a maximum value of 63750000

A quarter of the communes mobilize on average 88850 francs, half 898600 with an average of 4843000 which is lower. Subsequently, 75% of municipalities each mobilize on average less than 3274000 for parking and parking rights.

The Gini coefficient is 0.7913494 and confirms this strong dispersion of values around the mean.



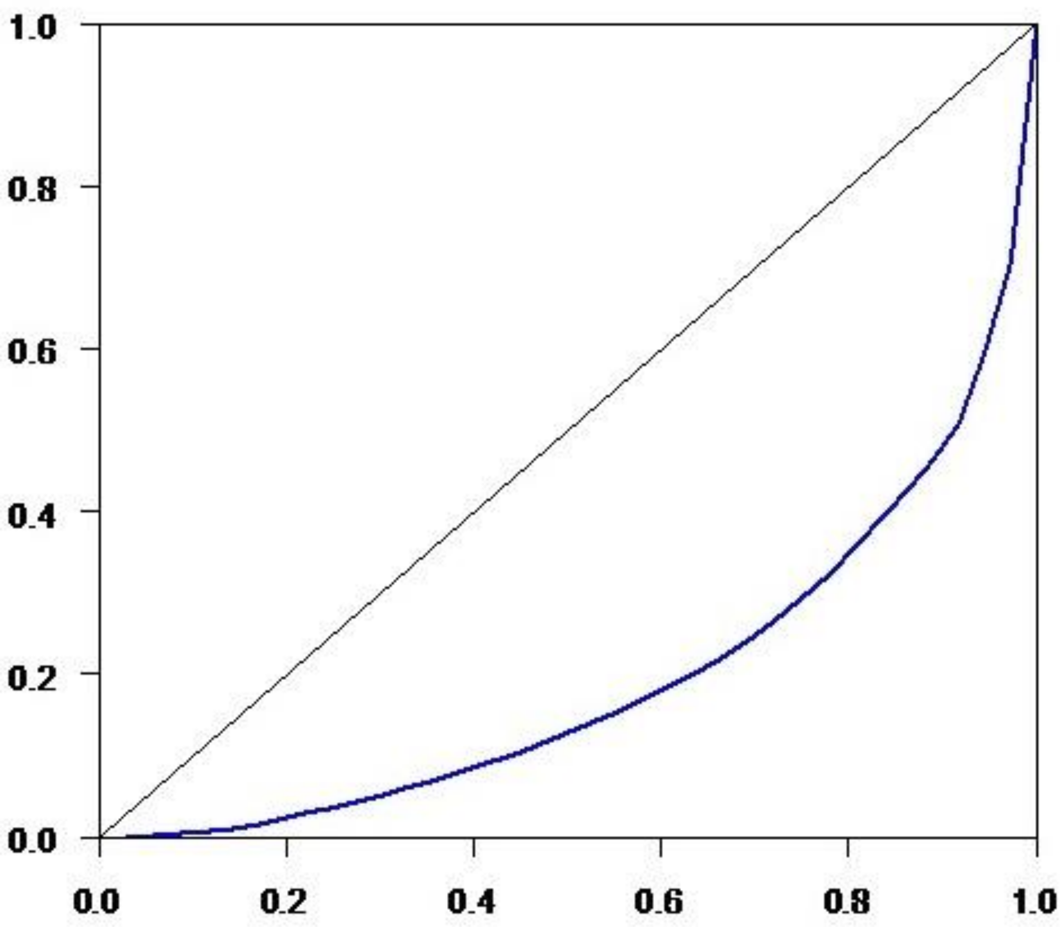
Graphic 2: Lorenz Curve of Parking and Parking Fees

Spatial dispersion of the values of local patents (PL)

See Table 8 Annex

The coefficient of variation = 1.83 therefore a strong dispersion of values related to local patents around the average in the border communes in the Republic of Benin. This dispersion is characterized by: a minimum of 123100 and a maximum of 270400000. Next, 25% of municipalities mobilize on average an amount of 6807000 linked to the value of local licenses and 50% mobilize an amount of 12490000 CFA francs around an average 25550000 and finally, 75% of municipalities mobilize an average of 26330000 CFA francs of licenses.

The Gini coefficient is 0.6087196 and confirms this strong dispersion of values around the mean.

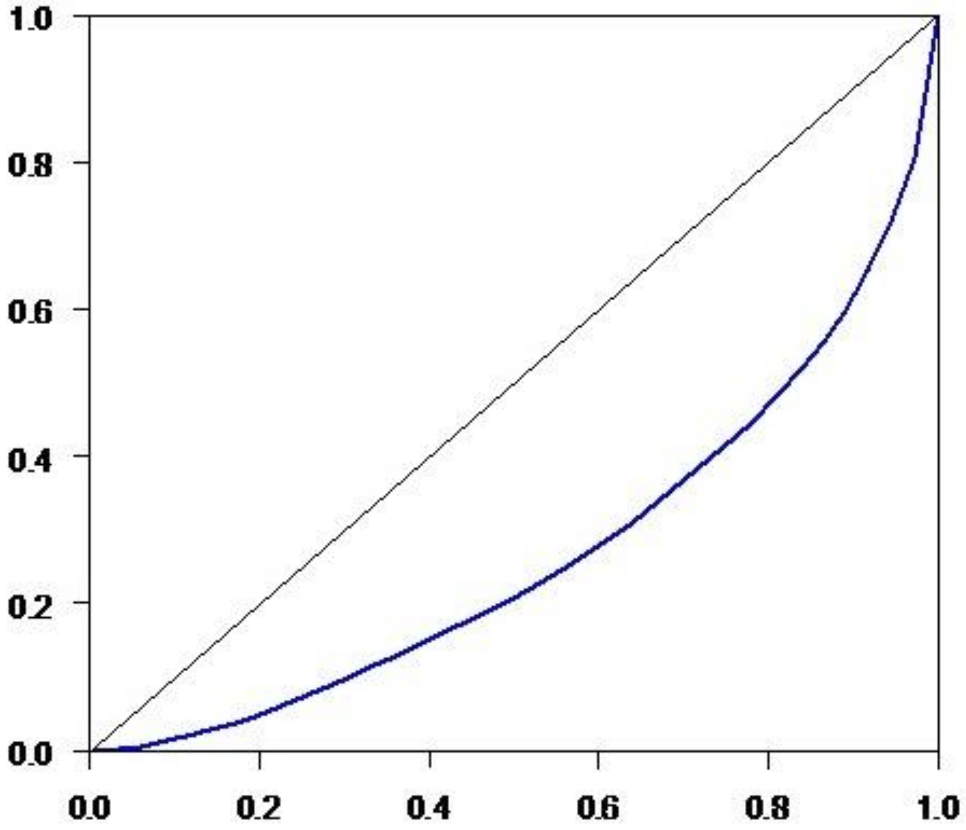


Graphic 3: Lorenz Curve of Local Patent

Spatial dispersion of the values of market receipts

See Table 9 Annex

Coefficient of variation = 1.20 so strong dispersion of values around the mean. The value of the Gini index is 0.4605592 and confirms the dispersion of values around the mean.



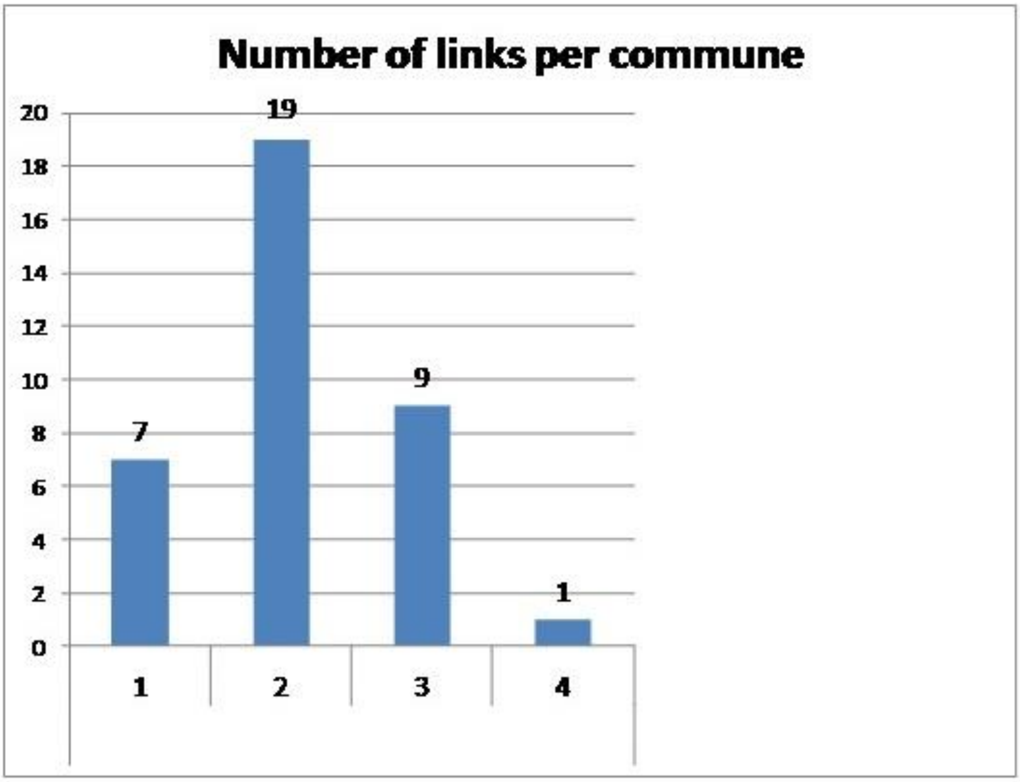
Graphic 4: Lorenz's Curve of Market Recipes

See Table 10 Annex

These results indicate that:

- There are 76 links between the 36 border communes of the Republic of Benin;
- These 76 links represent about 5% of possible crossings between these border municipalities (1296 possible crossings);
- Each border municipality has an average of 2.11 neighboring border communes;
- The neighborhood relationship is high for the municipality of Bassila which has four (04) neighboring border municipalities.

- The neighborhood relationship is very weak for 7 border communes which have only one neighboring border municipality. These are the Material, Natitingou, Grand-Popo, Sèmè-Kpodji, Malanville and Tanguiéta Communes.



Graphic 5: Distribution of the Number of links by Municipality

Assessment of the global spatial autocorrelation of TDs of Commons

Table 11: Global spatial autocorrelation of TD

Moran I Statistic	Expectation	Variance
0.12798301 statistic standard deviate = 1.0028 p-value = 0.3159	-0.02857143	0.02437111

Comments

These results indicate that at the 10% threshold, the CTs of the Commons are not spatially self-correlated significantly (p-value = 0.3159). TD Commons are distributed randomly.

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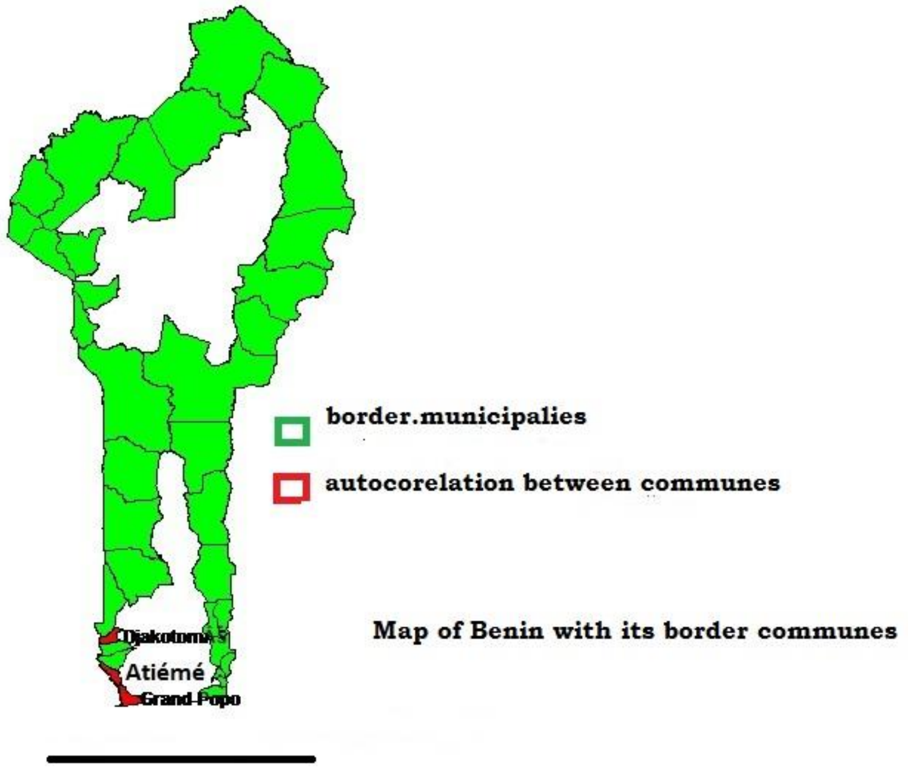
See Table 11

Comments

These results indicate that the communes of Djakotomey, Athiémé and Grand-Popo concentrate in their neighborhood, strong values of Taxes perceived at the customs cordon.



Assessment of the global spatial autocorrelation of the CSPs of the Communes

Tableau 12: Global spatial autocorrelation of CsP

Moran I Statistic	Expectation	Variance
0.01875153 standard deviate = 0.30313, p-value = 0.7618	-0.02857143	0.02437111

Comments

These results indicate that the global self correlation is not significant for the DSPs of the border communes.

See Table 12

Comments

These results indicate that as far as PSDs are concerned, none of the Border Communes concentrates in its neighborhood other strong or weak municipalities of PSD.

Assessment of the global spatial autocorrelation of the PLs of the Communes

Tableau 13 Global spatial autocorrelation of PL

Moran I Statistic	Expectation	Variance
-0.01259333 standard deviate = 0.10235, p-value = 0.9185	-0.02857143	0.02437111

Comments

These results indicate that the global self correlation is not significant for the PLs of the border municipalities.

See Table 13

Comments

These results indicate that as far as the PLs are concerned, none of the Border Communes concentrates in its neighborhood, other Border Communes with high or low values of PL.

Appreciation of the global spatial autocorrelation of the RRMs of the Communes

Tableau 14 Global spatial autocorrelation of RRM

Moran I Statistic	Expectation	Variance
-0.01932902 standard deviate = 0.059204, p-value = 0.9528	-0.02857143	0.02437111

Comments

These results indicate that the overall auto correlation is not significant for RRMs in the Commons.

See Table 14 in Annex

Comments

These results indicate that as far as RRMs are concerned, none of the Border Communes concentrates in its neighborhood, other strong or weak municipalities of RRM.

CONCLUSION

The aim of this work is to analyze the impact of the merchant networks of border municipalities and the spatial autocorrelation. The results show that the communes of Djakotomey, Athiémé and Grand-Popo concentrate in their neighborhood, strong values of taxes collected at the customs cordon. Ces résultats corroborent la pensée de Perroux (1961) ; Aydalot (1985) année sur le développement. Le développement émerge à des endroits précis, puis se propage et se diffus dans l'espace. Les innovations spatiales sont localisées.

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ANNEX

Table 1 : Variables used

Data used	**Components**
Operating revenue	Any item included in the operating revenue in the administrative accounts of the communes
Marchant Network Revenue Patents and Licenses	**Patents and licences**
	Border taxes
	Taxe on taxis cities
	Parking fee and parking
	Tax on boats and motorized canoes Provision of Services
Provision of Services, Taxes and Taxes	Taxes and Taxes Proceeds of shipments of administrative and other acts
	Royalties in urban planning and environment
	Property taxes on built and undeveloped properties
	Right to market service
	Local DevelopmentTax (TDL)
State subsidies for the operation of the FADeC communes **State**	FADeCWorking
	State

Source: 2015 Survey

Table 2: Result of the Modeling of Equation (i)

Variables	Coefficients	Probabilities
C	10.07993	0.0000
LOG(RRM)	0.530137	0.0000
LOG(PSIT)	-0.001494	0.9492
LOG(SEFC)	-0.008529	0.5122
R^2=0.591866;	**Prob (F-statistique)= 0.000002**	

Source: 2017, author works

Table 3: Residual Tests on the Model (i)

Test	Probabilities	Decisions
Autocorrelation ofBreusch-Godfrey	**0.9155**	**Non autocorrelation**
Hétéroscédasticity of White	**0.8745**	**Homoscédasticities**

Source: 2017, author works

Table 4: Result of modeling the equation [2]

Variables	Coefficients	Probabilities
C	6.553388	0.0000
LOG(PL)	0.558830	0,0000
LOG(DSP)	0.012442	0.1040
LOG(TD)	0.087867	0.0000
R^2=0.9240;	**Prob (F-statistique)= 0,0000**	

Source: 2017, author works

Table 5: Residual Tests on the Model [2]

Test	Probabilities	Decisions
Autocorrelation of Breusch-Godfrey	0.0299	Non autocorrelation
Hétéroscédasticity of White	0.0884	Homoscédasticity

Source: 2017, author works

Table 6: Spatial dispersion of VAT

Minimum	*3078000*
First Quartile	*5902000*
Median	*7819000*
Mean	*7711000*
Third Quartile	*9509000*
Maximum	*12070000*
Variance	*5.555974e+12*
Standard deviation	*2357111*
Coefficient of variation	*0,30568162*

Source: 2017, author works

Table 7: Spatial dispersion of DSPs

Minimum	*0*
First Quartile	*88850*
Median	*898600*
Mean	*4843000*
Thrid Quartile	*3274000*
Maximum	*63750000*
Variance	*1.316738e+14*
Standard deviation	*11474920*
Coefficient of variation	*2,36938261*

Source :2017, author works

Table 8: Spatial Dispersion of PL

Minimum	*123100*
First Quartile	*6807000*
Median	*12490000*
Mean	*25550000*
Thrid Quartile	*26330000*
Maximum	*270400000*
Variance	*2.186072e+15*
	46755446
Coefficient of variation	*1,82995875*

Source : 2017, author works

Table 9: Spatial dispersion of RRMs

Minimum	*3245000*
First Quartile	*20880000*
Median	*26910000*
Mean	*42970000*
Third Quartile	*44930000*
Maximum	*299300000*
Variance	*2.666469e+15*
Standard deviation	*51637868*
Coefficient of variation	*1,20171906*

Source : 2017, authorworks

Table 10: Results of the Contiguity Matrix (Distribution of the Number of Links)

Number of links	**1**	**2**	**3**	**4**
Nombre of Communes	**7**	**19**	**9**	**1**

Source : 2017, author works

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NIGERIA-UNITED STATES TRADE RELATIONS UNDER AFRICAN GROWTH AND OPPORTUNITY ACT (AGOA) (2000-2018): INTERROGATING THE TRENDS AND ISSUES

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ABSTRACT: *International trade relations between Nigeria and U.S. are strategic because the former is the largest economy among the Sub-Sahara African countries (SSA) that are a party to the U.S. AGOA initiative. But while the aggregate study of the impact of U.S trade relations with SSA countries is replete in the literature, a country-by-country study to examine in detail the individual state peculiarities effects on the interaction, more importantly looking beyond the preferential regime is missing. Therefore, this study interrogates the trends and issues emanating from the Nigeria-U.S. trade agreement with its implications for the post-AGOA era. Using factor endowment theory as a framework, the work explores credible secondary data sources alongside recent reports and studies to prosecute the research. It discovers that U.S. oil import from Nigeria dominates as the commodity for trade intensity excluding agriculture and manufactures products, making the trading to be imbalanced and deprived of mutual benefit. The study hence suggests that Nigeria should transform her political, education and socio-economic environment for proper positioning for maximization of her potentials both for AGOA and beyond U.S. trade partnership while the U.S. is to take deliberate steps toward ensuring sincerity of her interest in growing African economy amongst others.*

KEYWORDS: African Growth, Opportunity, AGOA, Trade Relations, United State, Nigeria

INTRODUCTION

International trade has been a leading and long connecting link between and amongst states in the world. Moreover, Trade relations across societies within and beyond geographical regions pre-date the modern era. Hence, Brewer (1980, cited in Aja 2002:20) maintains that trade among nations is the oldest element of interdependence among nations. In light of this assertion, it suggests that virtually every country has partaken in international trading in one way or the other. For example, agriculture was the main-stay of the Nigerian economy in the 19th-century pre-colonial era (Aghalino 2006, cited in Audu and Oshewolo, 2014:23). Thus, by implication, Nigeria's domestic and international trade in goods constituted largely of agro and its allied products during this period and largely before the independent economy.

However, Nigeria–United State (U.S.) economic relations within this period were not captured in the literature until the post-independent era which according to Ajinde and Aleyomi (2014) gained a limelight in 1961, in the official quarter, a year after Nigeria attained her political independence from the British colonialist, when U. S. President, John F. Kennedy, announces a $225 million as long-term development aid for Nigeria which was incorporated within her first National Development Plan (1962-1968). As such, it marked the beginning of the economic side of both countries' diplomatic relationship. It is noteworthy that Nigeria–U.S. relations was facilitated by the midwifery of Britain, the former colonial master of both countries, and the US policy towards Nigeria post-independent flourished because of the declining presence of its close ally, the United Kingdom (UK), in the country alongside Britain important intermediary role in the Nigeria-US relations (Ate 1986).

Consequently, trade and other bilateral relations between Nigeria and the U.S. appear to have progressively started gaining momentum with significance. Not only has the volume of trade between both countries soared but also foreign investment from the U.S. equally increased, almost exceeding that of Nigeria's traditional countries' trading partners. This might account for Ate (2000) averment that Nigerian economy provides the largest market in Africa for U.S. companies such that it is the largest foreign investor in Nigeria. Nonetheless, the trading relation is strategic to Nigeria and U.S. but the trends of benefit between both states' investment activities was seem not highlighted.

Furthermore, the U.S. government, in her quest to intensify and increase her trade relationship with the Sub-Sahara African (SSA) countries, enacted special legislation christened African Growth and Opportunity Act (AGOA). Moreover, varied bases were identified by scholars as purposes behind the AGOA trade relations. Edun , Khikmatullo, Bah, Oji-okoro and Abba, (2012), maintain that AGOA is aimed to build on existing U.S. trade programs by expanding the duty-free benefits that were previously available exclusively under the general system of preferences program (GSP) while Mahabir, Fan, and Mullings (2018) posit that the objectives are to deepened and expand investment trade relations between the US and SSA countries. Implicitly, AGOA was a move by the U.S. to enhance SSA states economic prospect in the global arena via mutual-beneficial and inter-dependent investment trade. But the experience, in terms of its impact on the former, in spite of the opportunity outlined, remains a controversial issue within the academia, government, and practitioners.

Also, there are diverse opinions, some premised on the empirical basis, on the impact of AGOA on SSA economy generally. Although both positive and negative effects are identified by scholars on African states, yet there has been little research emphasis on the individual country in SSA especially as regards a country relational benefit (on national aggregate) assessments premised on her peculiar economic features as the countries making up SSA are often analysed on the sub-group aggregate. Likewise, it becomes more important because AGOA agreement is bilateral and not multilateral based bringing necessity for individual SSA states fairing to the fore. And, because Nigeria is the largest economy among the SSA eligible countries, then, to what extent has AGOA objectives been realized with its implications for her domestic socio-economic development and relations with the U.S., other trading countries or continents?

Moreover, since AGOA has been extended to 2025 from 2015 with the unlikelihood of its renewal (Mahabir, Fan, and Mullings (2018), what are the commodities occupying the current or that supposed to, and are sustainable beyond the preferential trading era? Hence, the work is pertinent to both U.S., Nigeria and, by extension, SSA countries strategic planning for the optimization of AGOA's benefits, underscoring areas demanding adjustment in the act and the individual's country trade policy before and after its expiration.

Therefore, this research examines the Nigeria-U.S. trade relations under AGOA regime to ascertain the trends of benefits, and emanating issues since inception till date with a view to not only draw lessons but implications for both countries as individuals and trade-investment relations. The article is divided thus: Section one introduces the work; section two states the methodology; section three discusses the theoretical underpinning; section four examines the AGOA act; section five reviews Nigeria-U.S. pre-AGOA relations; section six interrogates the trends and issues on both countries interaction; section seven presents the findings and discusses means of optimizing Nigeria-US trade relations beyond preferential trade arrangement; and section eight concludes the study.

METHODOLOGY

To accomplish the objectives of this work, a qualitative research method was adopted. Credible secondary data was sourced to assess the volume of trade alongside emanating issues. Similarly, scholars' opinions from current documentary sources were employed to justify the quantitative data on a qualitative premise of descriptive analysis. These offer the empirical platform for the analytical explanation on which immediate recommendations were based and conclusion.

Theoretical Framework

Theories that offer explanations and aid better understanding of international trade abound in the literature. But, to shed light and put in a right context, the theory of factor endowment stands plausible and appropriate and as well facilitates our understanding of Nigeria-US trade relationship. Factor endowment or factor proportion theory was developed by two Swedish economists, Eli Hecksher (1919) and Bertit Ohlin (1933) (Akpakpan, cited in Aja, 2001:21). Though the theory was modified by Samuelson in 1948 and was known as Heckscher-Ohlin-Samuelson (H-O-S) theory or model of international trade (Aja, 2001), it was a response and modification to that of Ricardian Comparative Advantage Theory that postulates that a country should specialize in the production and trade with another in a product it has relative cost-efficient labour production over the other.

The shortcomings of comparative theory, which include its assumptions of two countries and products, labour input alone, homogenous quality with inelastic supply and its immobility internationally alongside others vitiate and limit its real-world application. Hence, Bolub and Taihsieh (2000) posit that "Ricardian emphasis on sector-specific technological gaps between countries is suggested by the recent international comparisons of productivity". Also, they argue further that labour cost emphasis and productivity differences have been supplanted by the neoclassical (Heckscher-Ohlin) focus on factor endowment.

Therefore, the theory of factor endowment bridges the shortcomings gaps inherent in the comparative advantage theory and postulates that a country specialises in the production of goods it has factors of production like land, capital, technology, management endowment and others. In addition, the theory included other factors of production, aside the labour, as the main determinant of a nation's production specialisation in international trade. Prakash and Anand (2014:53) aptly state thus: " Heckscher-Ohlin theory of international trade envisages that a country specialises in the production and export of such goods as conforms to its factor endowment " From this standpoint, it seems suffice to argue that factor endowment theory promotes more deeply than the preceding comparative counterpart basis for international division of labour because it conditioned it on natural resources, human capital, technology development availability or endowment, broadening the bases for international trade.

However, both theories – comparative and factor endowment - share the same underlying purpose and sentiment of the order of neoliberal economic school of thought. Factor endowment posits that when a nation factor endowment is effectively explored and exploited, it will enhance both importing and exporting nations' welfare and wellbeing mutually. Thus, it suggests that positive sum-game trade relations exist between trading partners or states.

Insights from the theory of factor endowment appear plausible to explain Nigeria-US trade relations, especially under AGOA regime. Nigeria endowment with natural resources more importantly, oil alongside with agro products, which AGOA act allows with free duty and quota, pictures a semblance of factor endowment trade relationship with U.S., having advanced technology, management, industry, capital resources and, service sector. Both countries, in this sense or expectedly, engage in a trade from their area of strengths of factors of production endowment that appear abundant at their ends. In effect, mutual and reciprocal benefits appear to accrue to both countries from their cross-border transactions. However, the fundamental question of whether it is fair to both, not a zero-sum trade relations or any other question bordering on either its short or long term "help or hurt" of such relations to both states' economy, more importantly, under the AGOA with its implications for its post-regime interactions, requires investigation. Therefore, the probability of uneven share of positive returns between Nigeria and U.S. or even among more than two trading partners is discernible as one of the shortcomings associated with the theory. As such, can this not likely be the case between Nigeria and U.S.? And, where this is applicable in the real sense, how can a country strike a balance of trade benefits to redress such lopsided gains? This is an area this work considers ferreting out.

AFRICAN GROWTH AND OPPORTUNITY ACTS (AGOA): CONTENT AND CONTEXT ANALYSIS

AGOA act was enacted May 18, 2000, mainly to seek economic development in 39 Sub-Sahara African Countries (SSA) by offering eligible countries enhanced trade preferences and encourage the elimination of trade barriers in those countries (United States Government Accountability Office, (USGAO 2015). In other words, barriers of quotas and tariffs hampering export of African goods to the U.S. market are eliminated to pave ways for a higher volume of trade and stimulate export especially, agro-products and apparel. It is intended as noted, according to U.S. government, to promote free markets, stimulate economic development in Sub-Sahara African through export-led growth and facilitate Sub-Saharan Africa's integration into the global economy (USGAO, 2015). Without controversy, it is a non-reciprocal trade agreement.

Furthermore, Edun , Khikmatulo, Bah, Oji-Okoro and Abba, (2012) assert that it is an act that enhances U.S. market access for SSA countries significantly, while Mevel, Lewis, Kimenyi, Karingi, and Kamav, (2013) aver that it provides trade preferences for Africa continent that is combined with the U.S. Generalized System of Preference (GSP) which permits duty-free export access to U.S. market for up to 6,400 product lines. Though products cover under

AGOA includes minerals - uranium, aluminium, zinc, oil; agricultural products, metal products, textile, footwear components, plastics, articles of wood, paper products, etc. (Matoo, Roy, and Subramaman, 2002), which can be classified as energy and non-energy products, SSA capacity for active trade engagement with U.S. appears doubtful considering its low technology, talent and financial status aside non-allowance for fragmented task but complete product constrains stipulated by the rule of origin.

As observed above, the AGOA act seems to be ambivalent. That is, it appears to make provision for a wide range of products but with oblique clause capable of limiting its optimal appropriation by SSA countries. As such, it suggests a contrast between the content or intent of the act and its application. This, perhaps, made USGAO (2015) canvassed for the review, alongside other studies, of the rule of origin of third countries especially, for apparel and fabrics products.

In addition, the act was initially meant to cover eight years from 2000 to 2008, but was extended, first to 2015 and currently to 2025 after amendments (Mahabir, Fan and Mullings 2018, Edun, Khikmatulo, Bah, Oji-Okoro and Abba, 2012). By this step, the US is pictured in good light of seeking SSA economic growth through AGOA preferential trade relations. However, the provision in the act requiring the US government to conduct an annual eligibility review in other to determine whether a country is making progress on economic, political and development reform as described in the act objectives as pre-conditions for determining eligibility (USGAO, 2015), appears to vest a veto power or exclusive right of sustenance of the bilateral trade on the US government or better still, the presidency, breaching the universally acceptable norm of collective bargaining as impeccable paths to mutual interest protection, mutual benefiting agreement, and respect for government autonomy. In fact, the U.S. termination of eligibility status of 16 countries since 2001 of the initiative especially that of Eritrea, Mauritania, Guinea, Madagascar, South Sudan (amongst others) based on political unrest or coup, and Democratic Republic of Congo, Gambia, Swaziland and Burundi predicated on the abuse of human or labour rights (Yanai, 2017), create room for one to express reservation about her political interest promotion under the auspices of trade relations.

Arising from the discourse are fundamentals embodied in AGOA act that is subject is contention attracting varied explanation as well as challenging the underlying purpose(s) and motive(s). For instance, some countries have lost their eligibility status as determined by the US government such as South Africa, Kenya and Mauritius (Moyo, Nchake and Chiriipanhura, 2018). This has generated concerns about the economic interest of the beneficiaries' states and seems not reconcilable with the AGOA objectives. Though Nigeria has not lost out her eligibility, probably because of her strategic position in SSA, the volume of her exported goods to U.S in comparison with her imports might have been impaired by one of these or other inserted conditions by the US government under the disguise of the eligibility review.

PRE-AGOA NIGERIA-U. S. TRADE RELATION: AN ASSESSMENT

Relationship between Nigeria and U.S. started before the former colonial independent. Both countries interactions could be traced to pre-second world war and have increased significantly thereafter (Obegolu 2013). As stated, U.S. president (John Kennedy) economic assistance in the early days of Nigeria's independence promoted the relationship further. Since Nigeria independence, especially in the last 54 years, the relations between both countries have passed through phenomenal stages and several issues of interest which include economy, drug trafficking, security (terrorism) and democracy occupy the central place in their interaction (Aleyomi and Ajinde, 2014).

Similarly, while Obegolu (2013) observes that both countries relations since 1960 have been hosted on a tripod of trade, foreign investments, and democracy, the economic appears underscored by aid and technical assistance of the U.S. to Nigeria amounting to 49.5 and 52.2 respectively (Ola, 2017:272). By implication, aid was the economic bait employed by U.S. to penetrate Nigeria's political space for influence and facilitate the creation of a market for her multinational's foreign investment drive. No wonder, Nigeria dumped the bequeathed British parliamentary system of government for U.S. modeled-after presidential, and perhaps, accounted for the presence of U.S. firms in Nigeria in less than two decades of independence.

Therefore, economic and political issues form the nucleus of US-Nigeria interactions and core interest. While these appear as undercurrent issue-area for promoting both economic liberalism and democratic ideology simultaneously, the seeming degree of influence disparity between both countries adds colour to the shared interest. Moreover, since AGOA eligibility criteria include economic liberisation, democratization, and respect for rule of law, human rights and labour rights protection, and non-indulgence of states in anti-America interest activities (Oluwafemi, Kudratov, Oury, Izuchukwu and Shehu 2012), can one discount or be skeptical about the marketing of liberal tenets using trade as instrument by U.S., as an influential global actor, and one of the leading advocate of western ideology. It suggests that it might largely be responsible for the enactment of AGOA amongst other reasons – overt or implied.

> However, it is interesting to note that the trade relationship between Nigeria and the US have continued to grow and wax stronger. In fact, United States Information Agency report in 1985 (Cited in Obegolu, 2013:9) asserted that Nigeria and U.S. have enjoyed increasingly active trade since Nigeria independence with trade index rising to $12 billion in 1980. This is an indication that US has been an active trading partner with Nigeria in the 1970s. The testimony as given by Howard Jater, a former U.S. Ambassador to Nigeria, in his address to the US House of Representative Sub-Committee on African Affairs attests to the intensity and object of trade between Nigeria and U.S. as stated by (Onuoha, 2008, cited in Obegolu 2013:95) thus:
>
> *Nigeria is the second-largest trading partners in all of Africa. America companies have invested over $76 billion in the country's petroleum sector, we import approximately 40% of Nigeria's oil production and Nigeria supplies nearly 8 percent of our total imports … US companies have invested substantively in the food and industries such as cola-cola, pepsi, 7up etc*

Arising from above, The U.S. multinationals investments in Nigeria alongside her interest in oil appear to heightened her interest in the economic transaction with Nigeria. Hence, Trade relations as a result of intra-firm trade between Nigeria (host country firms) and US home firms, and export of oil to the U.S. could not have declined below a reasonable level because both seem to be imbued with the propensity for an increase. It is, therefore, not surprising that Nigeria ranked second to Saudi Arabia as the supplier of petroleum, about 10 percent of U.S. oil import highly desired light and low sulphur crude. (Onuoha, 2001 cited in Obegolu, 2013:95). Similarly, more than 3,000 United States manufacturers and other business have local distribution investment partnership in Nigeria which is one of the largest economies in Africa (Obegolu, 2013).

In the three years preceding AGOA regime (1997-1999) Agada (2000, cited in Obegolu: 95) reported that U.S. imported and exported goods and services worth in U.S. dollar respectively: Import (6,349.190, 84,194.640, and 4,361.090) and export (814,292.00, 814,619.00 and 628,337.00). Obviously, that the volume of exported goods to Nigeria from U.S. out-weighted its import in the three consecutive years. For example, the difference between import and export in 1997 alone is 87,943 dollars. Also, the volume is far apart from equal, but underscoring the intensity of trade between both countries.

Undoubtedly, pre-AGOA U.S.-Nigeria trade relations is very significant to both countries, more especially to Nigeria that almost cannot jettison the interest of the U.S. as her major oil customer, and vital foreign investment source. Both oil and FDI are considered as life-oxygen for her economic survival, revitalization, and development. Notwithstanding the strategic position of U.S. to Nigeria state, it remains in sync with the expectation of AGOA as a launching pad for SSA economic elevation. And, likewise, both countries believe that the partnership would brighten the mutually beneficial trade relations. Nevertheless, let us proceed to ascertain how feasible this was with Nigeria by examining the trends of her AGOA regime trade relations with the U.S.

U.S-NIGERIA TRADE RELATION UNDER AGOA: TRENDS AND ISSUES

The trade relationship between Nigeria and the U.S. during AGOA years is expected, ordinarily, to not only foster mutual returns based on AGOA's terms of trade but incentivize the former to explore her agro resources. Nevertheless, the trend, in real sense, can best be understood when studied with data. Therefore, critical examination of items and the volume of trade will provide evidence for interrogation and analysis for this work. Table 5.1, 5.2, 5.3 and 5.4 present the trade relations between both states in the first 16 years before its extension from 2015 by the US to 2025, U.S. top import countries in SSA, U.S. top SSA states for export and five SSA sources of U.S. AGOA imports respectively.

Table 1: US Trade in Goods with Nigeria (2000-2015)

Year	**Exports**	**Imports**	**Balance**
2000	60.1583	878.1333	-817.9750
2001	79.5917	731.2417	-651.6500
2002	88.1417	495.4417	-407.3000
2003	84.7333	866.1167	-781.4083
2004	129.5167	1254.0333	-1224.5167
2005	134.9667	2019.95	-1884.97
2006	186.133	2321.925	-2135.81

2007	231.5	2730.858	-2499.37
2008	341.875	3172.342	-2830.48
2009	307.2667	1594.017	-1286.76
2010	338.375	254.3	-2204.63
2011	408.7333	2821.2	-2412.45
2012	419.1	1584.517	-1165.41
2013	532.4	976.9917	-444.575
2014	497.3167	319.9417	177.375
2015	291.4154	161.3154	126.2385

Source: United States census Bureau (2016). Note- All figures are in millions of U.S. dollars.

Table 2: Top SSA Sources of U.S. Imports

Country	Value (in millions)	% of Total from SSA	% Change from 2017	Top Commodities
South Africa	8,469.79	33.77%	+9.39%	Platinum/diamonds;Iron/steel; Vehicle/parts;
Nigeria	5,620.82	22.41%	-20.29%	Oil (crude); Fertilizers
Angola	2,698.36	10.76%	+3.64%	Oil (crude); Diamonds
Cote d'Ivoire	1,246.79	4.9%	+2.50%	Cocoa; Oil; Rubber; Cashew nuts
Madagascar	892.73	3.56%	+20.20%	Vanilla/cloves; Apparel; Cobalt; Titanium ores

Source: International Trade Administration (ITA) (2018)

Table 3: Top SSA Sources of U.S. Exports

Country	Value (in millions)	% of Total from SSA	% Change from 2017	Top Commodities
South Africa	5,517.08	34.82%	+9.90%	Machinery; Vehicles/parts; Oil; Electrical machinery; Civilian Aircraft/parts; Medical instruments
Nigeria	2,668.39	16.84%	+22.96%	Vehicles; Machinery; Oil; Cereals; Civilian aircraft
Ethiopia	1,310.89	8.27%	+49.45%	Aircraft/parts; Cereals; Machinery
Ghana	793.03	5.01%	-7.78%	Vehicles; Machinery; Oil; Med. Instruments; Plastics
Togo	563.60	3.56%	+16.97%	Oil; Vehicles; Organic chemicals; Plastics

Source: International Trade Administration (ITA) (2018)

Table 4: Top SSA Sources of U.S. AGOA Imports

Country	Value (in millions)	% Change from 2017	Sector	Value (in millions)	% Change from 2017
Nigeria	$4,361	-25%	Energy-related	$7,985	-14%
South Africa	$2,364	-19%	Textiles/apparel	$1,218	+18%
Angola	$22,006	-9%	Minerals/metals	$831	-12%
Chad	$601	+2%	Transp. Equip	$697	-47%
Kenya	$470	+15%	Ag product	$597	+8%

Source: International Trade Administration (ITA) (2018)

The import-export ratio within 2000-2015 on a yearly basis presented in table 5.1 indicates that there was an excess of import from Nigeria to U.S. within the succeeding 13 years, 2000 to 2013. Only the last two years (2014-2015) are contrary. The 2000-2013 evidence presents almost a uniform trend of trade relations between both countries pointing a high demand for Nigeria good from the US. If oil import constituted 40% of US imports from Nigeria in the pre-AGOA years, and table 5.2 shows that oil as a leading import commodity, it presupposes that AGOA did not make any significant alteration in the U.S. trade trend with Nigeria. Though fertilizer is a new import product to the US from Nigeria, its volume appears insignificant. This becomes worrisome if compared to South Africa, dealing in both natural and agricultural products, and Code d' Ivore optimizing agro-commodities export to U.S. Little wonder, Table 5.4 presents Nigeria as topping the US AGOA imports with energy related sector with approximately eight million dollars and difference of seven million dollars from South Africa (a huge differential), the next to her as trading partner with U.S.

Also, table 5.3 indicates that Nigeria is the second destination for U.S. export of automobiles, including aircraft. And, highly disturbing, is the refined oil U.S. exported to Nigeria, which almost cancelled out initial economic gains of the latter. Other implications of imbalance trade relations with the U.S. on Nigeria, expectedly, would be monumental. First, Nigeria failure to diversify its export commodity from oil even in the face of myriads of products accommodated by AGOA presents her as a non-proactive trade partner. Put differently, the abundant agricultural and human resources inherent in the country were not engaged to explore the huge U.S. market as the largest state amongst SSA, though the latter seized the former market and fuel to her economic advantage.

Secondly and as a corollary, the issue of products standardization and rule of origin might have discouraged Nigeria government in making effort to mobilize both local and foreign investors in taking advantage of U.S. preferential trade terms. While the standard is a necessity for many obvious reasons including human hygiene, safety, and product performance and durability, the U.S. over-sensitivity to inputs origin appears as a constraint to the exploitation of AGOA largesse to SSA, Nigeria inclusive. For instance, though about 85% of U.S. items attract duty-free access, most of the agricultural products that Nigeria and other Africa countries are more competitive, such as sugar and cotton, are excluded from the AGOA preferences (Yanai, 2017). Does this not appear as deliberate steps against the utilization of AGOA graciousness implying conflicting measures and insincere objectivity of U.S. interest in Nigeria and the SSA sub-regional economic growth via supposedly fair-trade deal?

Though, Onuoha (2001, cited in Obegolu, 2013:75) maintains that Nigeria exported primary products to the U.S that is Cocoa, groundnut, palm oil, palm kernel but imports demand from Nigeria was low rationalizing this with low income, lack of industrialization, and negligible use of foreign inputs. Nevertheless, does these problems peculiar to Nigeria among the SSA states? Obviously not, as it appears. Thus, this might have made the agro products not to top the list of U.S. imports from SSA.

Moreover, the Nigeria-US import and export trade in the recent past which, according to International Trade Administration (ITA) (2018), recorded as 1,875.38, 2,170.07 and 2,668.39, and 4,175.99, 7,051.83 and 5,620.82 for U.S. export and Nigeria exports for 2016-2018 respectively proves further the extent of the imbalance trade. For example, there was 2,952.43 dollars differential between both countries, indicating that U.S. imported more commodity from Nigeria than the latter import. This is a significant trade disparity between U.S. and Nigeria.

Furthermore, exported goods from the U.S. to Nigeria, presented in pre-AGOA last three years shows the dependence of Nigeria on the U.S. for intermediate raw material and finished goods. Low level of technology development is evident which make the export pertinent to service the multinational company affiliates and Nigeria consumers market, which probably have developed high taste and penchant for foreign goods. Be that as it may, still or ordinarily, grains ought not to form part of exports from the U.S. to Nigeria as an agrarian state, and the largest grower of cassava providing alternative flour source to wheat if the tempo of pre-independent and pre 1970 agricultural system is sustained and possibly improved upon. But unfortunately, according to Obegolu (2013:96), wheat imported from U.S. constitutes 10 percent of Nigeria's total importation, which seems not to have declined in recent years. Even vehicles imported from U.S. (new and fairly used) are not assembled in Nigeria but imported as a finished product.

The import from the situations described above reflects a deficiency in the negotiating power from the side of Nigeria's government. Although the act requires the U.S. government to unilaterally review eligibility status annually, it also provides for annual forum where representatives of the U.S and S.S.A meet to discuss ways to foster closer economic ties (USGAO, 2015). This forum supposes to have been capitalized by Nigeria government as a platform to bargain for fair terms of trade especially as regard to agriculture and manufacturing sectors capable to forestall the identified cases above and entrench mutually benefiting partnership.

Nonetheless, on a general note, it appears there is a consensus among scholars. And, based on the data analysed, oil or petroleum import from Nigeria and other SSA oil-producing countries remains the bulk of U.S import. Hence, Ola (2019:277) submits on Nigeria thus:

> *Nigeria trade with the U.S. was characterized by reliance on a few export commodities for foreign exchange earnings, especially oil. It would be recalled that it was after the arrival of American oil multinationals that crude oil was successfully exported from Nigeria…instead of adding to the old sources of foreign exchange the new commodity replaced the old ones so that the composition of export commodity changed without achieving diversification…U.S. trade with Nigeria was done in the interest of capitalist accumulation and not in the interest of growing Nigeria's economy*

It can be inferred, from the above discourse, that excess of import over export from U.S. to Nigeria is largely orchestrated by oil and gas before and during AGOA years with price fluctuations causing variation in the yearly balance index. Therefore, other commodities, especially agricultures and manufactures, are not significant in term of contributions or influence on changes in the trade trends cum dynamics between Nigeria and U.S. Hence, it suffice to conveniently submit that the trade relations between Nigeria and U.S. is not evenly balanced as energy constitutes the former imports since the pre-AGOA years; the latter does not engage her resources maximally, diversify her exports, is under-utilizing AGOA's export opportunity; AGOA does not spur trade-led economic growth capable of integrating her to global economy; and in overall, U.S. objective interest in Nigeria benefits from AGOA, as articulated, is questionable, more importantly as regard political and ideological influence or advancement and its economic effect. Nevertheless, it is more important to initiate what the imperatives are for both partners for sustenance of trade interactions, both currently under AGOA and beyond. This article offers these next.

FINDINGS AND DISCUSSION: POSITIONING NIGERIA-US RELATIONS BEYOND THE AGOA REGIME

Having analyse trends and issues under AGOA trade relations between Nigeria and the U.S., charting beneficial mutual trading under non-preferential trade is essential. To start with, Nigeria needs to pay greater attention to good governance. This is because domestic challenges impede the capacity development for meaningful engagement in international trade, especially AGOA. For instance, Davis (2017) identifies limited productive capacities and deficient infrastructures while Nouve and Staatz, (2003) and Collier and Gunning (1999) posit poor economic management, poor credit distorted products, high risks, weak social capital, and non-qualitative public service as hindrances SSA economic performance under AGOA including Nigeria (cited in Tadesse and Fayissa, 2008). This suggests that new and innovative policy architecture that can bring transformation to agriculture, petroleum, education, health, science and technology, leadership succession and economic management are all *sine qua non* to Nigeria's actualization of a favourable trade at the global arena.

As a corollary, Nigeria needs to employ 'products diversification and export redirection strategy'. Since Nigeria trade relations with the U.S. produces oil-trade intensification and with imminent end to AGOA initiative, wisdom demands she broadens her production base to agro and manufacture products. Expansive cultivation of cocoa, palm oil, groundnuts, cassava, among the ones she earned foreign income in the pre-independence and early years of independence or observe she possesses factors-advantages – as the theory suggests – to participating in foreign trade from the area of strength alongside value addition through industries. While farming incentives such as single-digit loans, farm input subsidy, and product-specific funding would guarantee an increase in agricultural products, deliberate promotion of small scale industries, especially cottage factories, like cocoa milling firms, cotton spinning company, palm oil processing factory, or modicum oil refinery, stands to facilitate increased value to the farm and petroleum produces.

Additionally, Nigeria should prepare for reciprocity trading regime with the U.S. and other trading partners, more importantly, Europe and Asia continents. As much as AGOA agreement will not be renewed, sustaining trading with the U.S. seems appropriate. One of the reasons is that the quality standard compliance of Nigeria would equip her products for international acceptability aside still serving as a market. However, the graduation of Seychelles from AGOA eligibility status as a result of gaining developed country status, and Kenya and Mauritius expressed readiness for non-preferential trade with the U.S. (Yanai, 2017) (all are smaller countries compare to Nigeria in almost every area) is sufficient to gear Nigeria up to brace-up for the fast evolving global trading environment characterized by free trade area regime and mega-regional free trade agreement such as, Regional Comprehensive Economic Partnership (RCEP) and Transatlantic Trade and Investment Partnership (TTIP), and take her destiny in her hand, though require collaboration with the countries in the region. Moreover, the current international trade trends, more so that preferential trading agreement violated World Trade Organisation (WTO) principle of Most Favour Nation (MFN) that stipulates fair reciprocal trade between states, Nigeria would be better off if she not only grasp the signal but reinforced her strength for liberal trading partnership.

In relation to the above are the instructive messages the declining nature of trade volume of not only Nigeria but the SSA with the U.S. According to Davis (2017), U.S. is no longer the most important market for SSA goods as it occupies the fourth position with China, European Union and India taking the first three positions respectively. As such, Nigeria should seize her trade relations with the trio countries and other emerging trade partners to broaden her trade partners' base to limit her susceptibility to U.S. trade fluctuations or any form of future external trade shocks. In addition, trade ancillary or concomitant returns, such as Foreign Direct Investment (FDI) with its accompanying technology, capital, and skills transfers pursuit becomes expedient to the Nigerian government. Though the competition of Africa trading, especially by China, seems perceived as threat to U.S. interest and AGOA initiative as counteractive response to China's incursion and heightened engagement in Africa political-economic space, it appears as a welcome development to Nigeria like the rest of Africa countries going by the intensification of trade between her and the new-found partners. Nevertheless, China's interest in Africa is argued to have important implications for the United State, especially of providing alternative political-economy ally (Shinn, 2011:5). And, in a similar vein, Lyman (n.d.) maintains that China renewed interest is a strategic threat to lock-up U.S access to oil, minerals, timber and undermine external western influence in Africa.

Moving to U.S. imperatives, it discernible that the volume of oil and gas exports has little impact on domestic technology transfer to lessen dependent, and U.S foreign firms have equally not promoted internal sourcing of inputs or provision of intermediate goods for production. Therefore, Encouraging U.S. oil firms to collaborate with local experts in technical skills and technology transfer for capacity building comes to fore. Similarly, discrimination of country based on the origin of goods like textile, garment hampers a free flow of trade between both countries (Matto *et al.*, 2002:25, NEPC, n.d.:18). Also, the eligible power of U.S government is an additional hurdle in this direction alongside the agricultural subsidy which is a form of protective trade measure against SSA under AGOA arrangement. It is worthy of note that agro-products subsidy is common among developed state which Sen (2010) described as turning backward trade liberalizing forces against developing states through "protectionist subsidies". In this regard, reconsideration of these highlighted impediments to Nigeria's effective trade engagement with the U.S. for corrective steps cannot be over-emphasized alongside the U.S. taking responsive actions to suggestions at the annual round-table discussions

To wrap up, in fostering U.S-Nigeria economic ties, mutual benefiting trade and engender Africa economic development could be said to be questionable going by the outcome of the shreds of evidence reviewed. Thus, Okolie (2015:65) submission that study on Nigeria–U.S trade relation under AGOA evaluation in 2006 revealed an insidious motive of dragging Nigeria economy further into the neo-liberal orbit that will continue to limit the chance of re-launching it to sustainable development trajectory appears in point, and agrees with this article submission. It is also in tandem with Ola (2017) but contrast Edun, Khikmatulo, Bah, Oji-Okoro and Abba, (2012) and Mevel, Lewis, Kimenyi, Karingi, and Kamav, (2013) averment of mutual economic benefits and U.S. seeking of Nigeria and African countries' economic growth ambition. Therefore, factor endowment theory adopted to underpin the fundamental basis behind AGOA in justifying Nigeria-U.S relations is undermined because while the latter engaged with her strength of capital, technology, and technical know-how the former failed to replicate with her rich human, material and agricultural potentials. However, further research on the trends as AGOA era draws closer to an end to find out if there have been any change and post-AGOA realities to ascertain both countries in relation to this article propositions can be undertaken.

CONCLUSION

The paper concludes that Nigeria's economy cannot be argued to have witnessed any significant growth under AGOA aimed towards that purpose despite her trade engagement with the U.S as no discernible significant impact is seen in former agricultural or manufacturing products trade intensity aside oil to the former witnessed in the pre-AGOA era. The resultant effect does not engender Nigeria's economic development as envisaged. U.S government exclusive standard determinant for good exportable to her economy and eligibility preference determination are forms of trade impediments while Nigeria's inability to mobilize her resources for an active trade engagement. Therefore, good acquaintance with policy details and recommendations articulated in this article are considered as viable paths for Nigeria trade relation currently, in the post-AGOA regime, and effective engagement in international trade relationship. Similarly, U.S. reconsideration of her trade principles and stance recommendations would foster a friendly and mutual benefit trade partnership even after the expiration of AGOA agreement with Nigeria.

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AN EVALUATION OF SLUM DEVELOPMENT AND ITS EFFECTS ON HOUSING QUALITY IN LAFIA METROPOLIS

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ABSTRACT: *Housing has been defined to be more than shelter in order to embrace all the social services and utilities that make a community or neighbourhood a liveable environment. Slum is a heavily populated urban informal settlement characterised by substandard housing and squalor. The research aimed at an evaluation of slum development and its effect on urban housing quality. To achieve the aim, the following objectives were observed; to identify the common types of slum found within the study areas. This research work is made possible through the use of both primary and secondary sources of data. The analyses were made in tabular form and they carried their respective percentages and different types of graphs and charts were used in the interpretation of tables. Based on the survey, a lot of findings have been made. The absence of good drainage system, sanitary system, refuse disposal, sources of water, standard buildings make living very difficult for the people and also have native effects on the housing quality of the dwellers within the area. At the end the researcher drives to his conclusion and make same recommendation that without any proper action from now year 2020 flood shall occur within the study area.*

KEYWORDS: Slum Development, Housing Quality, Urban**,** Drainage System, Refuse Disposal, Liveable Environment, Nigeria

INTRODUCTION

Housing has been defined to be more than shelter in order to embrace all the social service and utilities that make a community or neighbourhoods a liveable environment (WHO 1991).It comprises a ground of shelter, home and the attendant infrastructures, such as roads, water, electricity, communication, transportation etc (Omojine 2001) housing is an issue that reaches and touches the lives of individual as well as that of nature. According to (Agbala 1998) great importance is ascribing to the role housing plays in endangering human comfort by both nature and the society. From the above housing is not just a dwelling place but incorporating the shelter, infrastructure and the recreational environment.

The Nigerian government has always appreciated the significant role housing plays in national development; consequently, various policies have been put in place to enhance the development of housing before and after independence in 1960.

The National Housing Policies of 1991 forms the bedrock of housing delivery system in Nigeria. It provides the arrangement for affordable shelter for Nigerians, unfortunately most Nigerians are not familiar with other planning laws, building regulations and codes, consequently, they build without regards to the provision of the laws leading to urban slum and sprawl.

Inability of the government to provide plan areas with necessary services and infrastructures; forced individual developers to build houses within an unplanned area that lack the basic facilities, these areas are called slums. However, as a property owner, it is important that one understand the various factors that affect the value of a property and its quality, it is crucial that one know how this value is determine the quality of the housing. Doing so will protect your interest as a property owner; this and more the research is set in addressing.

Slum Development

Slum can is an area characterized by overcrowding, deterioration, unsanitary condition or absence of facilities and amenities like potable water, recreational ground, schools, clinic, post offices among other. However, because these conditions of any of them endangers the health, safety or moral of inhabitants of the community. Also, slum can be described as the extreme condition of blight or degradation. A slum area could be also look upon as an of the worse social, and economic conditions, there are two school of tort regarding slums;

a. Dirty habit of the dwellers and neglect building that make slum.

b. This says that it is the physical deterioration of physical element that encourages slum habit in the people.

These regards identify two types of slum;

a. Area which has be slum right from the inception that is area with insanity and bad housing condition resulting from the initial arrangements and construction and types of building material used.

b. Squalid housing resulting from misused of dwelling unit originally plan for lees intensive use.

Characteristics of Slum

There is no agreed definition of what a slum is or the criteria to measure slum. Yet this is very important that any attempt in urban renewal programme. Slum varies widely in terms of their location, spatial terms and socio-economic and environmental characteristic. It could be agreed that no too slums are the same; they differ in their history, growth and development, opportunities and challenges.

Slum tend to be seen either in terms of their location and spatial form, the typology inner, intermediate or peripheral slum adopted by Okdosu (2004) or terms of their legal status, as illegal settlements, squatters settlements etc, slum can be planned neighbourhoods that have run down or sporadic and chaotic unplanned neighbourhood that have emerged and grown organically. Some have even described them as slums of hope or slum of despair Peter Llyod (1979)

Causes of Slum

i. Low capital formation has been identified with slum areas, in developing countries like Nigeria, the major causes of slum is low capital formation of the less privilege group.

ii. Types of building in an area or environment which may be of poor architectural design, poor construction materials, and non-conformity to town planning laws. Land revenue system which encourages the sub-division of land to each number of families, this result in small plot that cannot accommodate a good standard of living.

iii. Break down infrastructure facilities such as pipe born water supply system, resulting in a filthy environment, lack of maintenance of roads which result in stagnant pool breeding mosquitoes.

iv. The change of use of building has also been identified as a symptom of slum. For instance, the change of single household, unit to two or three and sometimes even four household encourages slum development.

Effects and Facts of Slums

Increasing urban vulnerability rapid urbanization has brought several spatial and social economic developments, which exacerbate vulnerability to natural hazards. High population density coupled with poverty creates conditions in which a natural or technological hazard has the potential for much greater impact on people.

Increasing concentration of population and assets: The urbanization process has increased the concentration of people and assets, meaning that there would be bigger human and economic losses when hit by a disaster. As people migrate to cities for employment, and as investment in urban housing and infrastructure goes up in response to the aspiration of manufacturing and service sectors, more people, buildings, structure and enterprises would be affected by disasters unsafe locations in the cities, there is always competition amongst different social groups for access to land with land costs for housing often beyond the reach of most or all low-income groups, illegal lots with no services are settled. Most often, these locations are unsafe such as a will sides, marshy lands, gully, and low-lying areas.

Slums and squatter settlements: according to a recent un-publication, 32 percent of the world's total urban population, representing about 43 percent slums in 2001. Slums have in-tolerate housing conditions frequently including tenure insecurity, lack of basic services and infrastructure, inadequate and sometimes unsafe building structures, overcrowding and location on hazardous land. Additionally, slum areas are characterized by high concentrations of social and economic deprivation. As a result, the people living in slums are extremely vulnerable to the impact of disasters and have few choices and resources for reducing their vulnerability.

Urban Renewal

This is the gradual re-ordering of uses of land and building to meet present day requirement and estimated future need it implies a continuous process of planning and re-building of towns and cities sorting out uses that have become mixed in unsatisfactory ways and recombining them in new ways.

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Urban renewed here is used to describe the aggregated of techniques which can be developed for the treatment of urban problems on a physical basis

They may be seen as a group of building or an area characterise by overgrowing, deterioration, unsanitary condition or absence of facilities or amenities, such as portable water, drainage system, school, health facilities, and re-creational ground as defined by (Kehinde, 2002).

Development Process in Housing

Housing development as an integral part of the overall urban development process begins with the perception to development and terminates with occupation, letting or sale of the completed project. According to (Umeh 1977) the period of land development stretches from the gestation period through the construction of works and buildings to the marketing of the full product (Ikpe 2004) urges that housing process includes land acquisition, preparation, physical planning and design. Construction of building, roads, drainages, sewerage including provision of service such as electricity, water telephone, development, finance, contracts management, project completion, marketing and management (Omole 2001) list the stages under what he calls housing design and construction process, to include land procurement and negotiation for land acquisition, survey, subdivision, product of architectural and engineering drawings, approvals by planning authorities, (construction and supervision including infrastructural and building development) management and maintenance of completed projects for acquisition rental.

In his contribution (Lawal 2000) argues that the process includes preliminary stages, site selection and acquisition stages, planning and design stages, financing plan, construction operation and land of process.

Development in general, has been defined as the process of carrying out constructional works which are associated with changes in the uses of land or land with its building or with a change in intensity of the use of land or with re-establishment of an existing use such work, include alteration erection of building and also the construction of roads and sewers. The building of rivers wall or the laying out of playing fields (Litchfield 1974)

The Nigeria urban and regional planning Act No. 88 of 1992, defines development in the same manner as the British town and country planning Act of 1947 both see development as the process of buildings, engineering mining or other operation in over or under any land or the making of any material change in the use of building.

Whereas the repeated Nigeria town and country planning ordinance 1946, recognised development to be more than erection of building or re-building operation to include any change of use, the present NURP Act of 1992 includes demolition of building as a development entails the destruction of existing use site to pave way for proposed use.

From the above argument, development comes in three dimensions;

1. Creation of a new structure from a bare land
2. Creation of a new structure from existing structure by way of renovation, alterative, expansion etc.
3. Maintenance of existing structure to serve the purpose it was established.

Importance of Housing

The importance of housing to man cannot be over emphasized.

It is rated second in man's scale of basic and fundamental needs, (Lawal 2000) benefits accruing from housing range from personal security, emotional stability which has significant impact on economic development by generating both employment and income. The quality of housing stock is a reliable parameter of the standard of living, the level of technology, culture and civilization of the nation.

The maintenance of existing housing stock in an acceptable

Standard and living environment is as important as the addition to the housing stock.

(Onibokun, 1985) in his study indicated that about 67% of houses in Nigeria require minor or major and that overcrowding has become a characteristics of most urban cities, coupled with this is the inadequate of life support system such as water, medical facilities and infrastructures such as sewer, roads, electricity and communication facilities.

These shown the importance of urban renewal especially when many neighbourhoods of Nigerian urban houses are potential slum.

Problem of Housing

Housing is capital intensive and usually greater percentage of the people cannot afford the provision of their own houses out of their income. A good number cannot even afford to rent a decent accommodation for their family (Patrick Geddes 1932) yet housing is a basic need that must be met by every household. Housing has been seen as a social responsibility of every government, though it is obvious that government alone cannot provide all the housing needs of its citizens. The problem of housing has engaged both private and public sectors of Nigerian economy despite considerable investment and effort by the private and public sectors of the economy over the years, the housing problems of Nigeria has continued to increase in terms of;

i. The large number of houseless households
ii. Rapid growth of slum and unauthorized settlement
iii. Spiraling prices and rents of land and houses
iv. Deficiency in the availability of water, sanitation, drainage and basic service to bulk the population and
v. The increasing struggle of the poor and vulnerable section of that populace to secure affordable and adequate shelter.

Review of Past Policies and Programme on Housing

The colonial period up to 1960 witnessed housing policy concentrated on expatriate stall and selected indigenous staff in the government. The past independence period 1960-1979 housing cooperative were formed. The excess of the oil boom made the government to proposed the construction of 59,000 dwelling units across the nation with 15,000 units in

Lagos and 4,000 units in each of 11 states capital in 1973. Similarly, the proposed 202,000 dwelling units for construction comprising of 50,000 units in Lagos and 8,000 units in each of the 19 states annually only 20% were achieved. In 1984 to 1990 era, housing finance and restructuring of housing institution as well as new ones were at focus. This was to ensure that all Nigerians owned or have decent housing at an affordable cost by 2000 AD.

The inability of past government policies used to receive and formulating of new policies published in grass root. The aim was to remove the impediment to the realization of the goal of the nation to ensure that all Nigerians owned or have access to decent, safe and healthy housing accommodation at affordable cost.

Some of the objectives are;

i. To encourage and promote active participation of government in housing delivery.

ii. To develop and promote measures that will mobilise long- term sustainable and cheap funding for housing sector.

In Nigeria local government headquarters were designated as urban centres for the purpose of planning and allocation of resources likewise settlements above 20,000 persons. The economic administration and infrastructure facilities in the urban cities have amounted to increased urban populace and the growth of urban size in relation to land coverage.

Housing problems in the urban centres ranges from poor dilapidated houses and High occupancy rate of 6 to 8 and 10 to 20 in Zaria and Owerri (Godswill and Amadu, 2004). Sanitary condition that wildly spread diseases in congested areas which may lead to “slum”. The incidence was witnessed during the bubonic plaque that swept Lagos in 1928. However, it is expected that the urban population is expected to double its number from 35% to 61%; the urban problems leading to slum was caused by high cost of land, which the average people in Nigeria could not afford.

The living conditions in slum are usually unhygienic and contrary to all norms of planned urban growth and they are important factors in accelerating transmission of various air and water borne diseases.

The legal definition differs from state to state. ***Slum*** has been defined under section 3 of the slum areas (improvement and clearance) act, 1956, as areas where buildings are in any respect unfit for human habitation, are by reasons of dilapidation, overcrowding, faulty arrangement and design of such buildings, narrowness or faulty arrangement of streets, lack of ventilation high situation facility of any combination of these factors which are detrimental to safety health and morals.

Housing Quality

Housing is a fundamental need for dignified living and represents a major area of deprivation for the urban poor in Nigeria. The rate of provision of new housing stock in Nigeria has lagged behind the rate of population growth which is responsible for the formation of slums, growth of squatter settlements and high rent beyond the affordable limit of the poor. Housing poverty is manifested in the quality of housing occupied by low-income earners which is often of poor architectural standard, poor construction, and inadequate services. The lack of adequate housing accounts for the preponderance of the large proportion of urban dwellers in Nigeria living in housing at densities and environmental conditions which constitute serious health hazard and threat to their general productivity.

Housing quality is often evaluated in terms of the quality of design, building materials, standard of construction, and the provision and performance of public amenities. However, the satisfaction of the user population with their housing and its environment is an important determinant of housing quality. Meeting the needs of particular families is an important criterion in evaluating housing quality and therefore the value of a house is determined by the extent by which it satisfies or frustrates the needs of its users Turner (1972).

Conditions of urban housing in Nigeria are very deplorable. The studies affirm that 75% of the dwelling units in urban centres in Nigeria are substandard and the dwellings are sited in slums. The inadequacy of the quality of most of urban housing manifests mainly in the poor physical state of the buildings. They are often unsafe and insecure and do not provide adequate shelter from the elements of weather. Walls of the buildings are built mainly with poor sandcrete blocks, and concrete used for construction often contain excessive quantities of dust and clayey matter. Arum and Olotuah (2006) averred that this is inimical to the production of good quality concrete. In most cases the environment in which the buildings are located is, and this generally leads to slum conditions.

Good-quality housing is a key element for ensuring a healthy town. Poor housing can lead to many health problems, and is associated with infectious diseases (such as tuberculosis), stress and depression. Everyone should therefore have access to good-quality housing and a pleasant home environment that makes them happy and content. Specific aspects of housing quality are described in the following sections.

- **Ventilation**

  Adequate home ventilation is particularly important where wood, charcoal and dung are used for cooking or heating, since these fuels give off smoke that contains harmful chemicals and particulate matter. This can lead to respiratory problems, such as bronchitis and asthma, and make tuberculosis transmission easier. Women and small children are particularly at risk from poor ventilation if they spend long periods within the home or in cooking areas. Where cooking is done indoors, it is essential that smoke and fumes be removed from the house quickly and efficiently. Ventilation may be improved by constructing houses with a sufficient number of windows, particularly in cooking areas. Alternatively, houses can be constructed using bricks with holes drilled through them ("air-bricks"), which allow fresh air to circulate within the house.

- **Lighting**

  Poor indoor lighting can have many harmful effects on health and well-being. A poorly lit working environment in the home can lead to eyesight problems,

  For example. This is a particular concern for women working in indoor cooking areas. Poor lighting within the home can also make people feel more depressed. These problems can be remedied by adding windows to the house to increase the amount of natural light, which is much stronger than light from candles or lamps. In communities where it is important that privacy within the home is maintained, windows can be located where it is difficult for people to see into the house, or constructed with a mesh or lattice work which allows light to enter while guarding privacy. Increasing natural light is also important for home cleanliness: if a house is dark, it is more difficult to see dust and dirt and thus more difficult to clean properly.

- **Disease Vectors in the Home**

  Unless homes are kept clean and steps taken to prevent insects from entering, the homes can become infested with disease vectors.

- **Overcrowding in Homes**

  Overcrowding in homes causes ill-health because it makes disease transmission easier and because the lack of private space causes stress. Overcrowding is related to socioeconomic level, and the poor often have little choice but to live in cramped conditions. In principle, increasing the number of rooms in a house should improve the health of the people who live there, but increasing house size is often difficult. Careful planning of family size can also help to reduce overcrowding. If community members feel that overcrowding is a problem, they can take the initiative and press landlords to provide more space for tenants at affordable prices. This may necessitate working with local government and pressure groups to ensure that the housing laws and tenancy agreements are revised, and that everyone has access to houses adequate for their family size.

RECOMMENDATIONS

In view of the above findings, the following recommendation will go a long way in making Lafia attractive areas for real estate investors and attraction of high-income earners.

- The Local Government sanitary inspectors should educate the people on the need to clean their environment so as to improve the quality of land and landed properties.
- A special committee be set up to look into how buildings be planned by complying with the master plan in Lafia to enable clean and good areas for real estate investment.
- There should be a redevelopment scheme so as to attract investors in real estate while some of the houses that their state is beyond economic repairs be demolished to give way for good planning to take place.
- The Nasarawa State Government should gradually rehabilitate the area and provide basic amenities such as pipe borne water, drainages, electricity and other facilities so as to enhance the quality of properties within the area after demolishing structures that obstruct accessibility and space for other amenities.
- The State Government should empower the Nasarawa State Urban Development Board (NUDB) to create more layout and locate plot to low income earners within the catchment area to reduce the slum population and overcrowding of the existing housing stock.

CONCLUSION

From a sustainable resource use perspective, the historically past and recent housing developments in Nigeria cities were generally undertaken in an extremely sustainable way - massive urban sprawl and the destruction of potentially productive land, low numbers of housing units per kilometre of infrastructure line (energy, water, sanitation, storm water drainage, roads, rail, etc), rising levels of waste output, increasing levels of energy and material use, etc. Indeed, as the urban poor were located further and further outside of the city, so too did transport subsidies increase (Behrens & Wilkinson. 2003) thus increasing the dependence of the poor on rapidly increasing oil prices. Similarly, no provision was made for the fact that water and energy resources in our cities are facing depletion and infrastructural systems are overloaded. Many Nigeria metros and municipalities are facing the twin challenge of massively expanding the size of their formal housing stock to meet the needs of the poor, and a simultaneous increase in demand of middle-class markets. However, cities must begin to recognize and remain within accepted ecological limits with respect to energy, water, landfill space, sewage disposal, food supplies and biodiversity. The study has examined the effect of slum on houses within Lafia metropolis, from the data collected and analysed, it is with evident that the area is in slum already and it is increasing growing if no further effort is made to resolve the present situation at hand. The study was able to bring to light the extent to which slum can affect housing sustainability. These effects can be physical, social, functional or economical. However, with good urban renewal these effects can be wiped out. So, development authorities should ensure strict adherence to these laws so as to enhance housing sustainability and improve quality of life within the study area.

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