GLOBALIZATION AND ECONOMIC ENVIRONMENT: NIGERIAN EXPERIENCE FROM 1990-2018

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Abstract

This study examined the effect of globalization on economic environment in Nigeria. Quantitative research methodology was adopted using expo-facto research design to analyze the influence of the independent variable on the dependent variable. Secondary data were obtained from secondary sources using statistical bulletin of Nigeria covering the periods of twenty eight (28) years from 1990-2018. Secondary data were analyzed using multiple regression to generate study result. Based on the analysis of the study, findings revealed that globalization variable (foreign direct investment, FDI) is statistical significant to the economic environment (agricultural gross domestic product, AGDP) in Nigeria, Similarly, the result also showed that globalization variable (trade openness) is not statistically significant to the economic environment (agricultural gross domestic product, AGDP). The result can be interpreted that FDI has significant positive influence on the agricultural production while, trade openness has insignificant influence on agricultural gross domestic product. Study recommends Nigerian governments to adopt economic policies (such as tariff) to checkmate influx of goods into the country that will be detrimental to the environment. The reason is to protect the environment against use as a dumping ground or site for inflow of products that are obsolete. Finally, firms are advised to adopt eco-friendly technology in the manufacturing and energy sector to improve environmental performance and tackle climate change.

Keywords: Globalization, Environment, Foreign Direct Investment, Trade Openness, Agricultural Gross Domestic Product.

1. Introduction

The economic environment has experienced a lot changes over the past decades as a result of global activities. The world economies are integrated to allow material movement of goods, services and information flows from one country to another or across national boundaries. Human beings are connected through social, cultural, political and environments to meet up with their demands (Scholte, 2000).Globalization has led to an increase in the consumption of products and services which in turn put pressure on the environment.

Economic environment refers to the external economic factors in the immediate market place and in the economy that influence the buying behaviour of customers and business performance (Bensha, Hafiz, Sumant, & Charan, 2017). These include; interest rate, income, taxes, inflation, currency exchange rates, consumer discretionary income, savings rates, consumer confidence level, demands for company's product and services, competition and unemployment. Economic forces or factors determine business success or failure and influence the way businesses are operated in an economy either on a micro (small) or at macro (large) scale. The economic environment is driven by globalization such as; trade (transactions), migration and the dissemination of knowledge.

World Bank Report (2016) noted that an increase in trade transactions contributes to the global environment. Volumes of international trade and investment influence the development of the world economy. This implies that globalization contributes to trade openness and technological transfer from developed countries to developing nations. The report showed that the volume of international trade (exports, imports) and investment contributes to an increase in the world gross domestic product (GDP) by; 24% in 1960; 38% in 1985 and 52% in 2005 respectively. The report revealed thateconomic activity traded globally benefited both developing (poor countries) and developed (rich countries) with an estimate worth of 50 trillion dollars.

On the other hand, an earlier study by Brimelow (1995) also identifies a link between migration and the environmental impact in the United Kingdom. The authors noted that, migration contributes to population growth and environmental pollution. They stated that themigration of people from one place (developing) to another (developed countries) contributes to theglobal emission of gases which influences negatively the natural environment. United Kingdom Migration Report (2015) noted thatmovement of people from 1991 to 2009 for the past 19 years contributes to increase inthe emission of greenhouse gas (GHG) by almost 190 million tones on the environment. This has result to increase in population, thehigher fertility rate among demographic groups of settled migrants, leading to a shortage of food, shelter and job in most cities. The estimated population growth in the UK from net migration from 2008 to 2033 hasincreased to extraseven million to the actual population, thus increasing the UK's greenhouse gas emission by almost forty million tons of carbon dioxide in 2015, 125 million tons by 2020; 515 million tons by 2033. The report noted that migration influences adversely the natural environment resulting in greenhouse gas emission and climate change.

Some critics argue that,globalization has both positive and negative effect on the economic environment. Previous studies by Copeland and Taylor (2004) revealed that globalization has a positive effect on the environment. The authors noted that, trade liberation and technological transfer (openness) have an indirect effect on the environment. This implies thattrade liberation permits movement of material goods and services among countries where there are no trade restrictions. According to the scholar, trade liberation induces an economy to expand which in turn improve the living standard and economic development of a country. The authors noted that trade openness and technological transfer contribute positively toenvironmental quality. On the other hand,

Jayadeappa and Chhatre (2000) supported the views of Copeland and Taylor (2004) and concurthat; trade openness contributes to economic development. By implication, income realized from volumes of trade is usedfor environmental management and disseminate environmental sound technology.

Similarly, Bauernfeind (2005) point out that globalization creates opportunities for new market expansion in the environment. In a globalized economy, products and services are outsourced and produced in low wage economies where materials can be obtained (sourced) cheaper than other locations to reap the benefit of economies of location. Market opportunities open new doors for product varieties, development and customer's satisfaction. It also creates greater consumers choice. Globalization results to increase in competition which leads to a reduction in market prices around the world. It makes firms to be more active and internationally focused, rather than nationally centred. Firms have the opportunity to compete to survive in the changing atmosphere.

On the contrary, Afesorgbor and Demena (2018) argue that globalization has a negative effect on the economic environment. Globalization increases global competition which leads to an increase in economic activities that deplete the environment and its natural resources. The rapid growth of industrialization have continued to put pressure on the environment resulting to the threat to wildlife, loss of biodiversity, ecosystem degradation, ozone depletion and more environmental degradation (Baeck, Cho & Koo, 2008; Aditya, 2017). The pressure on firms to maintain competitiveness in the market place has continued to push them to adopt cost-saving production techniques that can harm the environment. The authors conclude that globalization hurts the environment.

Based on background information, research gap has been identified gap in the literature. Previous studies did not examine the influence of green technology on the natural environment (agricultural gross domestic product) in Nigeria from 1990-2018. This is the gap present study identified and set to achieve. Based on background information,

1.2 Statement of the Problem

The rate of global activities has increased movement of people, goods and services cross geographic boarders. Migration of people and material movement (raw materials or goods) from one region to another increases emission of poisonous gases in the atmosphere. Trade openness attracts technological transfer and production of goods in the factory which in turn increase the rate of emission of poisonous gases from the industrial plants and jet engines. This causes air, water and land pollution in the atmosphere (Afesorgbor & Demena, 2018). These pollutants affect agricultural environment thereby endangering the life of aquatic animals, causes growth of undesirable species of weeds and plants in the surroundings. Therefore, waste and other chemical products have negative effect on the ecosystem and can destroy both plants and animals in their territory thereby affecting adversely agricultural gross domestic product (such as biodiversity of earth species).

Consequently, environmental degradation can put humans, plants and animal species at disadvantage to survive in their natural habitat. In light of the above, poor environmental

quality is devastating to human life and disrupts agricultural production, consumers buying behaviour, market forces which has negative effect on the overall economy of Nigeria. The people living in those regions cannot engage in agricultural production due to their farmlands have been destroyed by pollutants. The economic environment of the region is characterized by high, inflation, high cost of living and lower agricultural productivity and people living in those regions suffer as a result of these problems.

In the light of above, poor environmental quality is the greatest problems affecting the province of oil rich states in Nigeria and can result in shortage of; shelter and food which can lead to a high incidence of poverty and low standard of living and poor economic development. Poor environmental quality can influence agricultural output per person, economic development and living standard in an economy. These problems can result in global poverty in the region if not well managed. It is against the back drop of these problems that study objective is formulated below.

1.3 The Objective of the Study

The general objective of this study is to examine the effect of globalization on economic environment of Nigeria from 1999-2018. Globalization is proxy to trade openness and foreign direct investment, while the environment is proxy to agricultural gross domestic product. The specific objective is formulated below.

- Examine the influence of trade openness on the agricultural gross domestic product in Nigeria.
- Ascertain the influence of foreign direct investment on the agricultural gross domestic product in Nigeria.

1.4 Objectives of the Study

Based on the study objectives, research questions are formulated to guide the study

- To what extent does trade openness influence the agricultural gross domestic product in Nigeria?
- To what extent does foreign direct investment influence the agricultural domestic product in Nigeria?

1.5 Research Hypotheses

The following research hypotheses were formulated to guide the study below.

- H_{01}: Trade Openness do not influence significantly the agricultural gross domestic product in Nigeria.
- H_{02}: Foreign Direct Investment do not influence significantly agricultural gross domestic Product in Nigeria.

2   Review of Related Literature

2.1 Conceptual Review on Globalization

Najam, Runnals and Halle (2007) defined globalization as the process of internationalization. This implies that internationalization represents cross-border trade and characterized by the relationship between people, companies and nations. Global movement facilitates the movement of people, goods and services between nations. According to (Björk, 1999), globalization is driven by; technology, market forces, competition and political forces. The concept of globalization has generated different meaning by different researchers. Nye and Donahue (2000) defined globalization as the process of increasing economic globalism. The authors explain that globalism involves the flow of goods, services, capital and information across geographic borders. According to the authors, globalization implies the elimination of barriers that affect trade to allow movement of material goods.

Globalization refers to the growth of social systems and the increase in the complexity of inter-societal links (Sheffield, Korotayev & Grinnin, 2015). The authors see globalization as a bridge that connects the past, present and future global activities among all countries. Global processes include; political, economic, geographic, ecological, social, cultural and religious factors. William Thompson contributes to the history of political and economic globalization an analysis of the significance of global events. He argues that, "the way we make sense of the world politics and episodes of accelerated globalization depends on our historic scripts and that these vary considerably". It is not so much a matter of disagreeing about what happened in the past as it is the one of disagreeing about which past events were most significant to an understanding of international relations processes (cited in Sheffield et al., 2015).

Globalization refers to the process of integrating people, companies and governments globally (Natal &Stoffels, 2019; Nilson 2010). Globalization is perceived by few as a form of capitalist expansion which entails the integration of local and national economies into a global, unregulated market economy. Global interaction increases the growth of international trade, ideas, and culture. Collins (2015) argues that, globalization results to the oppression of weaker countries by stronger countries. According to the authors thinking, the gains from trade openness are expected to bring down market prices and bring wins-win situations for both rich and poor countries. The reverse is the case because strong economies manipulate currency to get price advantage at the expense of weak economies. In light of the above; globalization favours rich economies, more than poor economies. The rich countries grow richer than poor countries.

2.1.1 Trade Openness

It is one of the major drivers of globalization. Trade openness is defined as the ratio of exports plus imports divided by the country's Gross Domestic Product, GDP (Fujii, 2017). The sum of export and import of goods and services represent the total trade. In order words, trade openness refers to total trade per GDP. Trade openness attracts a lot of economic benefits including increased technology transfer, transfer of skills, increase labour, economic growth and development.

Harrison (1996) defined trade openness as the degree to which an economy maintains its outward orientation in trade. Outward orientation refers to economies that take significant advantage of the opportunities to trade with other countries. Trade openness adds imports and exports in goods and services and divided by the Gross Domestic Product (GDP). The larger the ratio, the more the country is exposed to international trade. Trade openness (trade-to-GDP ratio) is often used to measure the importance of international transactions relative to domestic transactions. This indicator is calculated for each country as the mean of total trade relative to GDP. This ratio is commonly known as the trade openness ratio, though the expression "openness" to some extent is ambiguous, because a low ratio does not entail high (tariff or non-tariff) barriers to foreign trade (Organizations for Economic Co-operation and development, OECD, 2011).

A recent study has identified a link between trade and environmental with mixed result. Recent studies by Cheon, Danilova, Seung-Jick and Yun-Seop (2019) found that, trade openness has both positive and negative influence on environmental quality. Trade openness increases the rate of carbon dioxide emissions which has an adverse effect on environmental quality. The smoke emitted by vehicles using petrol and diesel pollutes the environment. The black smoke emitted from the automobile engines is causing air pollution which has an obvious direct influence on the environment by increasing pollution or degrading natural resources. These pollutants are unfriendly to the environment (Aditya, 2017). On the contrary, trade openness contributes positively to economic growth through economies of scale.

2.1.2 Foreign Direct Investment

On the other hand, Parmar (2018) also defined Foreign Direct Investment as an the investment made by a company or individual in one country in business in another country, in the form of either establishing business operations or acquiring assets in another country. The foreign investor exerts substantial influence over the decision making of foreign business. The author explains that FDI takes the form of subsidiary or mergers and acquisitions to enter foreign market and get access to its resources.

According to Sharma (2016) Foreign Direct Investment means a transaction in a country by foreign people. The author explains that money invested directly by foreign people improves the economy of the country and contribute to its economic development. FDI stabilizes economy of the investee, making it stronger and wealthy. The author observed that instability in a foreign country can affect FDI inflows and the effect be devastating such that investors can pool out their fund immediately they perceive unhealthy incidence in that country.

FDI serves as a source of external capital and increased revenue to both Multinationals (MNCs) and a foreign country. It can be a tremendous source of external capital for a developing country, which can lead to economic development. It offers several advantages for foreign countries. It serves as easy access to the market. This implies that it can be an effective way for firms to enter into a foreign market. Some countries may extremely limit foreign company access to their domestic markets. Acquiring or starting a business in the market is a means for you to gain access. Secondly, FDI is also an effective way for firms to acquire important natural resources, such as precious metals and fossil fuels. Oil companies, for example, often make tremendous investments to develop their oil fields. Thirdly, it targets the availability of cheap labour in a foreign market. It helps to reduce the cost of production in situation where the labor market is cheaper and the regulations are less restrictive in the target foreign market. For example, moving operations of production or manufacturing firms such as (shoe and clothing industries) in low-cost economies provide means of reducing costs of production by moving its operations abroad (Grimsley& Scalia, 2020).

2.1.3 Green Technology (ICT)
The word technology is a combination of two Greek words, *techne* and *logos.* Techne means "art, craft, or skill". Logos means "to speak of". Some have since taken the word *logos*to imply the practical application of *techne,* but others say that is stretching its etymological roots. Technology is the application of an art or skill (Waddel, 2013). **Technology includes the use of materials, tools, techniques, and sources of power to make life easier or more pleasant and work more productive.**Green Technology refers to those technologies that are eco-friendly (Mickoleit, 2010). They have positive impacts on environmental performance, ecosystems and directly contribute to reducing physical and energy inputs in their production, use, disposal and recycling of products. They also contribute indirectly through their wider application and use in other equipment and systems.

Similarly, Mickoleit (2010) observed that, technology has both positive and negative impacts on the environment. Smart technology applications can help optimize performance and reduce inputs per unit of output to enhance environmentalquality through the manufacturing, operation, disposal of devices and network equipment. It also provides ways to moderate energy use, for example through smart buildings and teleworking. For example, smart technology optimizes performance and helps to reduce greenhouse gas emissions associated with ICT applications to improve energy efficiency in buildings, transport systems or electricity distribution to enhance environmental quality. Though, technology has direct impact on the environment. The author noted that

direct environmental impacts of technology products come from manufacturing and service-producing firms and other related intermediate goods producers, consumers and users of ICTs. Technology producers affect the natural environment during production of goods and services and other operations (such as, industrial activities, building activities, vehicle fleets and logistics). Another, the environmental impact of technology comes from the way products are designed, produced, consumed, used and disposed of in the surroundings.

Technology refers to the use of computing and telecommunications systems to transmit, retrieve, and store data (Björk, 1999). The current trend of the internet helps to revolutionize the business world and creates electronic business and commerce in a global environment. Ausubel and Sladovich (1999) have identified the link between technological advancement and the environment. The authors argued that, increased production in the manufacturing have resulted in production of machines, weapons and automobiles. Emission of large quantities of poisonous gases in the air degrades the environment which in turn results in environmental pollution or degradation. Although, Björk (1999) argued that, advancement of technology is considered very useful in the manufacturing, automobile and other industries to make production quicker, accurate and efficient through automation processes. Technology can increase productivity and reduces production cost through batch production. Many of the products that we use can harm the environment. Technology can help save the environment through; cost efficiency and process improvement.

2.1.4 The Concept of the Economic Environment

Rokonuzzaman (2014) defined environment as the sum total of all surroundings of a living organism, including natural forces and other living things (biotic and abiotic components). These two components interact with each other and they are interdependent. The environment consists of the interactions among plants, animals, soil, water, temperature, light, and other living and non-living things.

On the other hand, the environment simply means surroundings or environs. It may be regarded as a space in which networks of relationships, interconnections and interactions between entities occur. It is often used interchangeably with the ecosystem. The ecosystem is a large community of living organisms living in a particular area (Soas, N.D). Rokonuzzaman (2014) classified environment into three categories; built, natural and social environment. Built environment refers to man-made surroundings that provide the setting for human activities. It encompasses places and spaces created by people. Example include; buildings, parks and supporting infrastructures. The natural environment comprises of living and non-living things occurring naturally on earth. It is known as the habitat. Social environment refers to the physical and social settings in which people live. It includes; culture, language, social condition, the political and economic capability of people in an area. The social environment is considered among other elements of the environment to achieve the purpose of the study. It is chosen because it is the major component that deals with human interaction.

2.1.5 Agricultural Gross Domestic Product (AGDP)

Gross Domestic Product is defined as the final value of the goods and services produced within the geographic boundaries of a country during a specified period of time, normally a year. GDP growth rate is an important indicator of the economic performance of a country (The Economic Times, 2020). Agricultural Gross Domestic Product (AGDP) is the GDP coming from the agricultural sector (World Development Report, WDR, 2008). Agricultural production (such as farming, forestry, and fishing) contributes to the Gross Domestic Product of a country. Agricultural output is a component of the GDP of a nation. The industry is the segment of the economy concerned with the production of goods (including fuels and fertilizers). Industrial output is a component of the GDP of a nation. In 2018, agriculture contributed around 21.2 per cent to Nigeria's GDP, 25.75 per cent came from industry, and 52.01 per cent from the service sector. According to Statista (2020), agriculture, forestry and fishing employ the highest number of people (4,837,693), followed by wholesale and retail trade sector (12,097,189), manufacturing (5,337,0000) and other service activities (3,471,702) in Nigeria. Three sectors constitute economic activity in Nigeria. They include the primary sector (agriculture, forestry and fishing), the secondary sector involves the industry (manufacturing, processing or transforming goods) and tertiary sector which include services (information technology, tourism, banking). The performance of these sectors contributes to the economic development of Nigeria.

In other countries like the United States of America, agriculture, food and related industries contribute to $1.053 trillion of US gross domestic product (GDP) in 2017, 5.5 per cent share of GDP. The output of America's farms contributes to about 1 per cent of GDP worth $132.8 billion dollars.

2.2 Theoretical Review

This study is anchored on Technology Gap Theory (TGT) postulated by M.V. Posner in 1961. The theory accounts for technological changes and huge benefits enjoyed by the country that introduces new technology and products in the market. This implies that the exporting country enjoys a monopoly until other countries have imitated the new goods or learn new processes of production. This monopoly position is often protected by the patents and copyrights. According to the theory, the technology gap exists between the time new products are created by domestic producers and the moment foreign market adopts it. He maintains that technological change is a continuous process of inventions and innovation that give rise to international trade (Giancarlo, 2014). The author argues that even if countries have similar factor proportions and tastes, yet the continuous process of inventions and innovations can give rise to trade. The author explains that new product is tested in the home market to confirm its efficacy before it is introduced in the foreign markets. The theory has gained more ground in the international market and supported by Joseph Schumpeter's idea of creative destruction. However, the theory is not supported by neoclassical economists and theorist such Heckscher-Ohlin. Most critics argued that the theory does not account for the size of the technological gaps or imitation gap in a precise manner. Secondly, the theory fails to explain why technological gaps arise and how they get eliminated over time.

However, Posner posits that technological gaps are constituted by three lags. They include; foreign reaction lag, domestic reaction lag and demand lag. Foreign reaction lag is the time required for the innovative firms to produce the products with new technology and these products will be exported to external countries. Domestic reaction lag is the time taken by all domestic firms to continue producing relatively newer versions of the products as to retain their shares in the global market before their competitors. Demand lag is the time that the domestic consumers need to adapt their taste for the new products (Dominick, 2019).

Finally, the theory is connected to the study on "the effect of globalization on economic environment of Nigeria from 1999-2018". This is because globalization is associated with international trade and the assumptions of technology gap theory highlights on foreign trade which is in tandem to the study.

2.3 Empirical Review

Several researchers have researched on globalization and economic environment in Nigeria and other countries. This has generated a lot of arguments in the literature. Some of these studies conducted by different researchers are reviewed below.

Karatas (2016) examined Environmental Impacts of Globalization and Proposed Solution in Turkey. The study adopted a theoretical review to achieve study objectives. The paper was categorized; on the concept of globalization and the roles education in solving environmental problems. The authors proposed that environmental education (awareness) and media (television, newspaper) are keys to achieving environmental problems.

Cheon, Danilova, Seung-Jick and Yun-Seop (2019) examined the effect of Trade Openness on Environmental Quality in Korea. A descriptive survey designed was adopted to collect secondary data for the analysis. The study covered the period of 2000 to 2013 using nine countries and one member country. The hypothesis was tested statistically using mean and standard deviation to estimate the relationship between trade openness and per capital income. The result showed that trade openness increases the emission of carbon dioxide in the environment. This implies that trade openness has a negative influence on environmental quality. Findings showed that trade openness increases per capital income and contributes to the economic growth of an economy.

Baek, Cho and Koo (2008) carried out a study on the Environmental Consequences of Trade Liberation on the Quality of the Environment in Developed and Developing Countries. The study covered the period of 1960-2000. Secondary data were obtained from 50 countries from David Stern's data site. Data were analyzed statistically using regression to test the relationship between the variables. The result showed that trade liberation improves environmental quality in developed countries, whereas they have adverse effects on environmental quality in most developed countries. Findings showed

that trade and income growth causes a change in the environment quality in a developed country, and the opposite relation holds for a developing country.

Shahbaz, Shahbaz, Mahalik and Hammoudeh (2017) examined the Causal Relationship between Globalization and Emission for 25 Developed Economies in Asia, North America, Western Europe and Oceanic. The study covered the period of 1970 to 2014. Data were analyzed using time-series and panel data technique to generate study result. Findings revealed that globalization increases the rate of carbon emission and has an insignificant relationship with the environmental quality in developed economies.

On the other hand, Christmann and Taylor (2001) examined the linkage between Globalization and the Environment in China. Study adopted a descriptive approach and secondary data to achieve study objectives. Findings showed that, globalization does not relate to environmental quality. The authors observed that, globalization variables like openness (international linkages) contribute greatly to environmental quality through the effective implementation of environmental regulations.

Borderon, Sakdapolrak, Multarak, Kebede, Pagogna and Sporer (2019) examined Migration and Environmental Change in Africa. The study adopted a systematic reviewed literature approach to achieve study objective. The study selected 53 studies that adopted qualitative and quantitative method in exploring the influence of environmental change on migration. This was done using Climig database and systematically analyze the literature considering the multidimensional drivers of migration. Findings revealed that migration variables (such as socio-economic, demographic and political factors) contribute to environmental change. The study concludes that migration has a significant influence on environmental changes.

Dean (2013) carried out a study on the Effect of Trade Liberalization on Environment in China. The study was conducted using a literature review approach to analyze various works on openness, growth and environment using the Kuznets curve. A simultaneous equation system was derived which incorporates multiple effects of trade liberalization on the environment. Estimation pooled Provincial data on Chinese water pollution suggest that trade openness contributes to environmental damage and income growth in China.

Mishra (2015) analyzed the Linkages between Environment and Globalization using case study of Developing Countries. The data were analyzed using the Panel data technique to generate the empirical result. Findings showed that globalization variables (openness) contribute to the pollution level in developing countries.

Ugwu and Njoku (2014) wrote on Imperatives of Globalization on Economic Growth of Emerging Economies; Evidence from Nigeria. The study covered the periods of 23 years, from 1980 to 2013. The study adopted descriptive survey using secondary data to generate data for analysis. Data were analyzed using Regression to test the stationarity

of the variables. Findings showed that the variables such as foreign direct investment, total trade, export and balance of trade contributed positively to economic growth; while import do not contribute to the economic growth of Nigeria.

Previous studies examined the influence of globalization on environmental quality on other countries. None of these studies examined the influence of trade openness and foreign direct investment on the agricultural domestic product in Nigeria. This is the gap study identified and seeks to fill using quantitative research method.

3.0 Research Methodology

This study employed a quantitative methodology with the aid of expo-factoresearch design to analyze the influence of the independent variable on the dependent variable.Secondary data were obtained from secondary sources using statistical bulletin of Nigeria between the periods of 1990-2018. Data obtained from the survey were analyzed using multiple regression method with the aid of E-viewsto test and analyze the impact of globalization of the environment in Nigeria. The general model for this study is proposed below.

3.1 Model Specification

The general model is thus;

$Y_{it} = \alpha + \beta_0 X_{it} + \mu_{it}$

Where,

Y_{it} = dependent variable,

α = represent the intercept

B_0 = model parameters

X_{it} = independent variables,

μ_{it} = error terms,

i = number of firms and

t = number of time periods.

The model is further specified as;

Agric production (natural environment) = f (a function of trade openness and foreign direct investment).

AGRIC. GDP it = $\beta 0it + \beta 1$ $FDI_{it} + \beta 2$ TRAD. OPEN. $_{it} + \mu_{it}$

Where, AGRIC. GDP = Agricultural Gross Domestic Product,

FDI= Foreign Direct Investment,

TRAD. OPEN. = Trade Openness (sum of export and import divide by the GDP)

Based on the above model, secondary data were analyzed using ordinary least square method (OLS) or multiple regression method to test.

4. Data Presentations and Discussion

The section presents and interprets data obtained from the secondary source.
Appendix 1 contain information on Presentation of Data from 1990- 2018

Table 1: Multiple Regression Result
The result of our regression model is shown below.

Dependent Variable: AGRIC_GDP
Method: Least Squares
Date: 03/29/20   Time: 18:23
Sample: 1990 2018
Included observations: 29

Variable	Coefficient	Std. Error	t-Statistic	Prob.
FDI	0.026756	0.005990	4.466973	0.0001
OPENESS	6.419442	75.63140	0.084878	0.9330
C	2308.307	415.8592	5.550694	0.0000

R-squared	0.942120	Mean dependent var	9293.963
Adjusted R-squared	0.937668	S.D. dependent var	5019.316
S.E. of regression	1253.144	Akaike info criterion	17.20240
Sum squared resid	40829643	Schwarz criterion	17.34384
Log likelihood	-246.4348	Hannan-Quinn criter.	17.24670
F-statistic	211.6026	Durbin-Watson stat	0.413838
Prob(F-statistic)	0.000000		

Source: (E-Views).

4.2 Interpretation and Discussion of Result

From the regression results above in table 1, we can see that FDI is statistically significant at 5% while trade openness is not.

Therefore, our regression estimate is

AGRIC. GDP = 2308.307+ 0.026756 FDI + 6.419442 Openness

It is clear from the estimate above that both FDI and trade openness have a positive relationship with the response variable and this is in tandem with established theory and also in line with our apriori expectation. However, it is also clear to see from the estimate that trade openness exerts a far much stronger effect on Agric GDP than FDI.

Again, with an R^2 value of approximately 94%, we can see that the model captured approximately 94% of the variations in the dependent variable. Therefore, we can safely infer that the regression model has high predictive power and also has a good fit on the data.

4.3 Test of Hypothesis

H_{01}: Trade Openness do not influence significantly Agricultural Gross Domestic Product in Nigeria.

H_{02}: Foreign Direct Investment do not influence significantly agricultural gross domestic Product in Nigeria.

In order to confirm the specification status of our model 4.2, we employed the analysis of variance (ANOVA).

4.4 Decision Rule

The F ratio calculated (211.6026) isgreater than F-ratio probability value (0.000000), which is less than 0.05 level of significance, we reject the null hypotheses which states that trade openness do not influence significantlyagricultural gross domestic productin Nigeria; and accept the alternate hypothesis which states that trade openness influence significantly agricultural gross domestic product in Nigeria.

5 Conclusion, Recommendations and Future Research

The section presents the conclusion, recommendations and future research work below.

5.1 Conclusion

As mentioned earlier the objective of the study is to examine the impact of globalization of the environment in Nigeria from 1999-2018. Based on the analysis of the study, findings revealed that foreign direct investment, FDI is statistical significance to the agricultural gross domestic product, AGDP in Nigeria. The result can be interpreted that FDI has a positive influence on agricultural production. The reason is attributed to the fact that some of the foreign direct investment operating in that area comply with the environmental impact assessment (EIA) regulations. Similarly, the result also showed that trade openness is not statistically significant to the agricultural gross domestic product, AGDP). This implies that trade openness exerts an insignificant influence on agricultural production. The findings are in agreement with the work already done by; Copeland and Taylor (2004) which states that globalization has a positive effect on the environment. The findings also disagree with the work of Afesorgbor and Demena (2018) which states that globalization has a negative effect on the environment. Our findings are in tandem with the literature.

5.2 Recommendations of the Study

Based on findings and conclusion, the authors recommend the followings;

I. The Nigerian governments are advised to adopt economic policies (such as tariff) to checkmate influx of goods into the country that will be detrimental to the environment. The reason is to prevent the environment against use as a dumping ground or site for the inflow of products that are obsolete.

II. Firms are advised to adopt eco-friendly technology in the manufacturing and energy sector to improve environmental performance and tackle climate change.

III. Firms' managers are advised to deploy environmental sound technology in the transport system to encourage green environment.

IV. Governments are advised to impose sanction on firms that default in the use of eco-friendly technology in their operation activities to serve as a deterrent for others to emulate. This will help to sustain the biodiversity of earth species, human lives and natural environment against degradation.

5.3 The Study Limitations and Future Research

The research work is limited to the effect of globalization on the economic environment in Nigeria.The study covered a period of twenty-eight (28) years from 1990-2018. The geographical coverage of this study is limited to Nigeria. However, the study did not harness the regional gross domestic products in different zones in Nigeria. The

theoretical scope of this study is built on the technology gap theory of trade to connect globalization with the agricultural environment. Future researchers are advised to identify problems from another perspective. Future researches are advised to consider future study on the relationship between globalization and environmental quality in Nigeria.

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Appendix 1: Presentation of Data from 1990- 2018

Year	Export (NB)	Import (NB)	GDP	Trade Openness	Agric GDP	FDI
1990	109.89	45.72	19,305.63	0.008	3,464.72	10899.6
1991	121.54	89.49	19,199.06	0.011	3,590.84	10436.1
1992	205.61	143.15	19,620.19	0.018	3,674.79	12243.5
1993	218.77	165.63	19,927.99	0.019	3,743.67	20512.7
1994	206.06	162.79	19,979.12	0.018	3,839.68	66787.0
1995	950.66	755.13	20,353.20	0.084	3,977.38	70714.6
1996	1309.54	562.63	21,177.92	0.088	4,133.55	119391.6
1997	1241.66	845.72	21,789.10	0.096	4,305.68	122600.9
1998	751.86	837.42	22,332.87	0.071	4,475.24	128331.8
1999	1188.97	862.52	22,449.41	0.091	4,703.64	152409.6
2000	1945.72	985.02	23,688.28	0.124	4,840.97	154188.6
2001	1867.95	1358.18	25,267.54	0.128	5,024.54	157525.4
2002	1744.18	1512.70	28,957.71	0.113	7,817.08	162343.4
2003	3087.89	2080.24	31,709.45	0.163	8,364.83	166631.6
2004	4602.78	1987.05	35,020.55	0.188	8,888.57	178478.0
2005	7246.53	2800.86	37,474.95	0.268	9,516.99	249220.6
2006	7324.68	3108.52	39,995.50	0.261	10,222.47	269844.7
2007	8309.76	3911.95	42,922.41	0.285	10,958.47	302843.3
2008	10114.74	5238.20	46,012.52	0.334	12,330.33	364008.5
2009	8402.15	5116.46	49,856.10	0.271	13,048.89	399841.9
2010	11706.74	7614.66	54,612.26	0.354	13,429.38	441271.3
2011	14822.61	10235.17	57,511.04	0.436	13,429.38	482339.2
2012	14736.10	9084.45	59,929.89	0.398	14,329.71	486951.4
2013	14840.72	8808.10	63,218.72	0.374	14,750.52	489373.4
2014	15360.89	9124.56	67,152.79	0.365	15,380.39	476168.9
2015	14940.08	9313.08	69,023.93	0.351	15,952.22	483708.2
2016	14969.45	9082.56	67,931.24	0.354	16,607.34	484050.5
2017	15027.78	9082.07	68,490.98	0.352	17,179.50	483325.2
2018	15074.5492	9150.57	69,810.02	0.347	17,544.15	481813.2

Source: (Statistical Bulletin 2018).