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IMPACT OF GLOBALIZATION AND TRADE LIBERALIZATION ON LABOUR MARKET IN NIGERIA

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Abstract –
This study analyses the impact of globalization and trade liberalization on the labour market in Nigeria. Data on trade openness, balance of trade, import duties, exchange rate and labour force were used in formulating the model. The study applied the error correction model technique in analyzing the data. The findings reveals that trade openness and import duties positively affected growth of labour force in Nigeria; only import duties significantly affected labour force. Also, balance of trade and exchange rate had negative effects on labour force with only exchange rate decreasing labour force significantly. The study concludes that globalization and trade liberalization have had positive effects on the labour market in Nigeria, specifically; trade openness and import duties have increased the labour force in Nigeria from year to year thereby leading to increased production and growth of the economy. The expected impact of globalization and trade liberalization on labour force in Nigeria confirms the fact that globalization/trade liberalization has had a multiplier effect by increasing labour force and output of other economic sectors. The study advocated for increased trade openness via increase in volume of exports, development of local technology to boost output and increased access to foreign market to further enhance the country's labour force.

Key words: Globalization, Labour force, Labour market, Trade liberalization

1.0 Background to the Study

Globalization has been seen in various economic literature as the continuous narrowing of the gap between nations of the world (see Held 1997; Mittelman 1995; Hobsbawm 1990). It can be perceived as the most resilient factor in today's world. It implies a drastic reduction of distance both in time and space. In other words, globalization has greatly reduced the obstacles imposed by spatial reality on interactions between nations. Globalization and trade liberalization are inter-related in that trade liberalization seeks to create a freer trade between two countries by way of removing barriers to trade such as import tariffs, export taxes etc. Both concepts have thus occasioned a far-reaching assault on state frontiers and a reduction of the communication barriers between states. With this surging socio-economic reality, there has been the spread of influences, goods and artefacts from one end of the world to another. But just like in most other development related phenomenon, globalization has created some unequal partnerships between the developed and the developing world. In this sense, the developing world can be seen as more or less the receivers or clients of globalizing trends powered or supplied from the developed world.

It might be helpful to point out that the structural adjustment programme marked a very significant impact of globalization in Nigeria. This is especially the case when it is remembered that even though more than thirty African countries embarked on various forms of the adjustment programme, Gross Domestic Product (GDP) stagnated in sub-Saharan Africa and per capita consumption fell in twenty three out of forty-one African countries during the same period (Demery and Squire 1996). It is crucial to emphasize that the effect of the adjustment on the labour sector was not totally unforeseen. As a matter of fact, the adjustment programme aimed at a reform of the labour sector in Nigeria. Thus, the World Bank (1994) saw this as central to the implementation of the programme. This effort to make the labour market flexible created unmitigated wage failures and long-lasting unemployment and can be seen as the nucleus of the problems of labour today (Anugwom 2001).

Furthermore, the opening up of the economy to external forces on a free market principle (trade liberalization) may have spawned some enduring influences on the nature of labour utilization in the country. This can be fully appreciated if it is recognized that while globalization has meant the movement of finance, ideas and goods more easily across national boundaries, the mobility of labour has not improved likewise, especially in the case of the majority urban-based semi-skilled work force. While skilled workers are relatively mobile in the industrial sector, semi-skilled workers are largely immobile are and often locked into the various sectors of the economy where they find themselves (Anugwom, 2007). Hence, while labour mobility has improved a little for the highly skilled workers, semi-skilled labour has become even more immobile. As a matter of fact, the International Confederation of Free Trade Unions (ICFTU 1999) saw trade liberalization as exacerbating developmental inequalities, environmental degradation, workers' exploitation and gender imbalances. Therefore, the large proportion of Nigeria's labour force which falls into this category may be confronted by labour realities determined by globalization.

Globalization and trade liberalization are two economic policies that are central to the understanding of the changes in the Nigerian labour market. The movement to trade integration (brought about by globalization and trade liberalization) has undoubtedly increased world growth in goods and services; and has increased incomes and raised standards of living globally, which doesn't mean the same, unfortunately for each individual in Nigeria. Employment participation for both male and female has been on the decrease, the share for wage employment and self-employment has also been decreasing since 1986 reform period when SAP was introduced. The agricultural sector accounts for the bulk of Nigeria's employment rate and the sector employed 71% of the total labour force in Nigeria in 1960 and by 1977 this had dropped to 56%. This was 68% in 1980, falling to 55%. Obayelu (2017) further observed that the effect of globalization has not been holistically felt in the balance of trade statistics for Nigeria with BOT recording negative values recently.

It is still unclear whether the degree of open trade put at 42.7% % in 2010 and 21.3% in 2018 has reflected on the unemployment rate in the country. The relationship between the rising unemployment rate in Nigeria and the continued advocacy for global economic integration has not been properly established in economic literature. The problem is in the area of data generation which seeks to correlate employment generation with globalization and trade liberalization indices. This is the problem this research work intends to solve by clearly and succinctly establishing the bridge between globalization and trade liberalization on labour market in Nigeria. It is on this basis that this study seeks to find out the influence of globalization and trade liberalization on labour market in Nigeria with specific reference to the industrial and manufacturing sectors.

Objectives of the Research

The main objective of this study is to examine the impact of globalization and trade liberalization on labour market in Nigeria. Specifically, the study aims at:

1. Ascertaining the relationship between the degree of trade openness and the labour market in Nigeria;
2. Determining the extent to which Nigeria's balance of trade has affected the labour market;
3. Determining the relationship between import duties and the labour market in Nigeria;
4. Investigating the relationship between exchange rate and the labour market in Nigeria.

Research Hypotheses

The following hypotheses, stated in their null forms, are formulated to further guide the study:

H_{01}: There is no significant relationship between trade openness and the labour market in Nigeria.

H_{02}: There is no significant relationship between balance of trade and labour market in Nigeria.
H_{03}: There is no significant relationship between import duties and labour market in Nigeria.
H_{04}: There is no significant relationship between exchange rate and labour market in Nigeria.

Scope of the Study

The scope of the study is within the period of 1980- 2018, reflecting on the objectives of the study and data set. The study focuses on globalization and trade liberalization as they affect the labour market in Nigeria only.

The study covers the following indices of globalization and trade liberalization: Trade openness, Balance of trade, import duties and exchange rate. Similarly, the main proxy for measuring the labour market in Nigeria is the rate of employment as it is believed that globalization and trade liberalization will either have an increasing effect on the rate of employment or a decreasing effect on the rate of employment in Nigeria.

The time scope for the study (1980-2018) is considered sufficient enough to determine the long run relationship between globalization and trade liberalization indices and the labour market in Nigeria towards making useful projections for the growth of the Nigerian labour market and the economy at large.

2.0 Review of Related Literature

2.1 Conceptual Review

Globalization: According to Giddens (1990), globalization implies the intensification of worldwide social relations which link distant localities in such a way that local happenings are shaped by events occurring many miles away. However, this definition gives the impression that globalization is a balanced process of interchange or exchange between societies. Globalization has been everything but a balanced process of interchange between the global South and North. In spite of the controversies that have trailed the concept ranging from its nature as a contested or paradoxical concept (Geigher 1988; Cerny 1997) to its conceptualization as a process occurring for ages now (Olurode, 2003), globalization can be clearly distinguished as a new dawn in the process of relationship and interchange between societies in the world. In other words, globalization as now conceived signifies a new dimension in international relationship premised in reality on inequality.

As Lee (1997) pointed out, globalization has aroused much concern regarding its social repercussions. Fundamental to such concerns are the effects of globalization on employment, income or wages and labour supply and utilization. These concerns can be seen as crucial in countries with an underdeveloped economic base. The influence of globalization on the labour sector can be seen as very prominent since the economic dimension of globalization has been the most influential in government policy determination. In fact, the economic connotations of capitalism have led some writers to posit that globalization is nothing short of the expansion of capitalist hegemony. Be that as it may, such globally propelled economic initiatives, as privatization, liberalization and commercialization, have been instrumental in economic policies in Nigeria. These initiatives, which aim at restructuring and reshaping the economy, may have affected the dynamics of the labour market in the country. In this sense, labour market logic and labour utilization may be affected by these policies.

Globalization and Labour Utilization in Nigeria

Adesina (1994) argues strongly that the adjustment programme in the country introduced in 1986 and which took its toll on Nigerian workers was based on a fallacy that sees the average African worker as an over-paid and pampered worker. According to him, this apparent falsehood was one engendering force behind the introduction of the programme. On a similar note, Anugwom (2007) has seen the wrong conception of the reality of the African worker by external agents as originating from the backward sloping supply curve of African workers made popular by colonially inspired literature of the 1960s and 1970s. This notion argues that the African worker is one of the least productive in the world and labour supply in Africa is inclined towards reduction as the wages increase. In fact, it states that beyond a particular wage level, Africans will stop submitting themselves to labour but concentrate on enjoying what has been earned. This thinking subsequently informed the colonial attitude to Nigerian workers and was carried over to the post-colonial period.

It might be helpful to point out that the adjustment programme marked a very significant impact of globalization in Nigeria. As has been well-documented (Adesina 1994; Anugwom and Anugwom 2000) the programme was a massive package of macroeconomic panaceas from the Bretton Woods Institutions for the ailing Nigerian economy. However, the adoption of this panacea has not helped the economy of the country in any significant measure. Hence, it might be in order to question the basic premise underlying the adjustment programme and subsequent post-adjustment economic policies in the whole of the continent. This is especially the case when it is remembered that even though more than thirty African countries embarked on various forms of the adjustment programme, Gross Domestic Product (GDP) stagnated in sub-Saharan Africa and per capita consumption fell in twenty three out of forty-one African countries during the same period (Demery and Squire 2016). It is crucial to emphasize that the effect of the adjustment on the labour sector was not totally unforeseen. As a matter of fact, the adjustment programme aimed at a reform of the labour sector in Nigeria. Thus, the World Bank (1994) saw this as central to the implementation of the programme. This effort to make the labour market flexible created unmitigated wage failures and long-lasting unemployment and can be seen as the nucleus of the problems of labour today (Anugwom, 2001).

Trade Liberalization

Trade liberalization loosely defined is a move towards freer trade between two or more countries and entails removal of import quotas and other quantitative restrictions. It also involves the abolition or reduction of import tariff rates, removal of export taxes, removal of protection for infant industries, elimination of non-tariff barriers and devaluation of the local currency (Odejimi & Odejimi, 2015).

During the last three decades, trade liberalization was welcomed with open arms by several developed and developing countries. This is so because of the assumed benefits that could accrue in the areas of substantial wage increase and relative labour demand. According to Ajayi (2001), "the appeal of a more open economy is based on simple but powerful premise, that is, economic integration will improve economic performance. Additionally, globalization and trade liberalization will offer new opportunities such as expanded markets and the acquisition of new technologies and ideas all of which can yield not only increased productivity and employment but also higher standards of living". However, Khor (2001) observed that the conventional view that trade liberalization is necessary and has automatic and generally positive effects for development is being challenged empirically and analytically.

Nigeria's Experience with Trade Liberalization and Labour Market

Trade liberalization was one of the hallmarks of the Structural Adjustment Programme (SAP) in Nigeria and it entailed import liberalization, market determination of exchange rates, free marketing of export commodities, employment generation and rapid industrialization. The implementation of the policy acquired greater significance in the 1990s with the conclusion of the Uruguay Round (UR) of multilateral negotiations and the emergence of the World Trade Organisation (WTO). In Nigeria, the data provided by the Central Bank shows that major current and capital account transactions in the economy have been substantially liberalized.

The liberalization policy has had a devastating effect on local production and employment and has discouraged further investment in Nigeria. Indeed, trade liberalization has been accompanied by de-industrialization in Nigeria. Both the Manufacturing Association of Nigeria (MAN) and the Nigerian Labour Congress (NLC) have drawn attention to a number of industries and firms that have gone under as a result of trade liberalization. In the Guardian Newspaper of April, 27, 2008, the Group Managing Director of Chanrai Group of Companies spoke on how the importation of finished textile products to Nigeria led to the closure of his textile company in Nigeria named Afprint which started operation in 1966. This led to over 3000 employees being thrown into the labour market. In the same vein, several companies like Eleganza, Doyin Groups, Toyo glass, Arewa Textile, Calcemco, NIFOR just to mention a few closed down, sending thousands of workers home. Poor countries, Nigeria inclusive do not have the wherewithal to compete internationally whether as it concerns trade or labour conditions. The vital thing lacking in Nigeria is a conducive environment, security and infrastructural support to boost production in the private real sector (Obadan, 2008).

According to Obadan (2008), the near full throttle liberalization of trade embarked upon by Nigeria has given rise to massive inflows of all manner of finished products from industrialized countries of the West and Asia, including fairly used products like textile, footwear, automobiles, motor cycles, refrigerators, air conditioners, televisions, radios, blenders, etc; substandard and fake products like pharmaceuticals, cosmetics, toiletries, electrical materials, foods, wines, etc. Some of the goods apparently dumped on the Nigerian market are goods that can be produced or are being produced in Nigeria.

One of the major limitation or disadvantage of this situation is that, infant industries and small scale struggling businesses find it difficult and to say the least, impossible to compete in the world market with these products. For example, the unit cost of producing a stick of candle in Nigeria is about 150% the price of an imported candle stick from China. Now, how can the candle factories in Nigeria compete for market or even strive to export? How would the millions of skilled and unskilled labourers be employed if factories are closing down for inability to compete with foreign products? These are few of the questions begging for answers.

Theoretical Literature Review

2.2.1 Traditional HOSS Theory of Trade

The traditional Heckscher-Ohlin-Stolper-Samuelson (HOSS) model constitutes, since long time, an important framework to investigate the impact of trade liberalization on labor market. Following this theory, the country will specialize in the production of goods relatively intensive in abundant factor. Suppose that we have a simple model with two countries (developed country and developing country), two factors (unskilled labor and skilled labor) and two goods (one intensive in skilled labor and the second intensive in unskilled labor). With the same technology of production, the openness of trade between the two countries can lead to an expansion of goods exportation and importation. Developing country, which is specialized in the production of good intensive in unskilled labor, following its comparative advantage, will export this good. In another side, a developed country specializes in the production of good intensive in skilled labor and will export this good.

Stolper and Samuelson (1992) cited in Arslan (2009) established the relationship between the prices of goods and the price of factors. The important result of their theorem is that trade liberalization reduces the wage inequality in the developing country and *vice-versa* in the developed country through the change in the relative prices of goods. Consequently, in developing country, the relative price of good intensive in unskilled labor rise and, thus, increasing the relative wage of unskilled labor. In the developed countries, the relative wage of skilled labor increases.

New explanations: However, one can envisage that is possible to extend the HOSS framework in order to account for multiple skill-related categories of workers (Wood, 2009), country groups (Davis, 2016), and traded goods (Feenstra and Hanson, 2016). In this case, the theoretical prediction of the HOSS model become undetermined and depends on the relative weights and directions of trade flows. Otherwise, if the assumption of production technology similarity among countries is relaxed, then trade liberalization may induce technology diffusion from developed countries to developing countries. These new technologies imported by developing countries are more skill intensive in relation to those in use domestically before trade liberalization. The expected result can be an increase in the relative demand for skilled labor and an increase in the gap of wages between skills.

Explanations based on HOSS model: The empirical evidences developed above can be considered as a first test for the realization of the HOSS model predictions. The results finding by this works triggered a large reconciliation tentative of the theory with the evidences by considering several extensions of original HOSS model. A simple extension of the model, which should reconcile the theory with the evidence, can be doing by introducing non-traded goods or additional factor of production in the model, Wood (2009). Suppose that there are two factors of production skilled labor, unskilled labor and land (natural resources). As assuming that some developing countries are relatively abundant in land, and that this land is a complement with skilled labor, then a great trade liberalization will favored the labor intensives goods in these countries. If the production of these goods requires a high ratio of skilled workers to unskilled workers, trade liberalization will be beneficial to skilled workers. This argument is based on a non-realistic assumption that the lands require a high ratio of skilled labor. However, the inclusion of non-traded goods may reverse the outcome of the model when there is a particular pattern of substitution between consumption of traded and non-traded goods (Leamer, 2015). For instance, in the developing economy with an abundant supply of unskilled labor, non-traded goods intensives in labor may be close substitutes to goods more intensive in skilled labor. Thus, greater openness reduces the price of the skill-intensive traded good, causing a rise of its demand and the fall of non-traded good demand. Consequently, demand for unskilled labor in the non-traded sector falls, which may not be offset by the rise in demand for this category in the traded sector (Wood, 2017). As a result, relative wage of unskilled workers drops in the developing world and widening the relative wage gap. Davis (2016) employed a ‘’cone diversification” analysis to study the distributive consequences of trade liberalization. Accordingly, to him the problem is the relative position of a given country amongst the other countries within its own cone. The developing countries in this analysis are considered an unskilled abundant in global terms, but maybe are skilled abundant in local terms, in relation to other developing countries. If we consider this later definition of abundance, the trade openness has the opposite impact on distribution of revenue of what we expect in a traditional HOSS framework (Davis, 2016).

One can apply this argument to developing countries with middle-income. These countries are supposed unskilled-labor-abundant relatively two countries with low-income. As a consequence, if middle-income countries liberalize their economies to trade, they have to face the competition of labor-intensive manufacturing from low-wage, labor abundant low-income countries, and this can change their comparative advantages in labor-intensive exports, possibly resulting in a decrease in demand and wages for unskilled workers and in a wider wage gap.

2.2.2 Theory of Globalization

Globalization is commonly used as a shorthand way of describing the spread and connectedness of production, communication and technologies across the world. That spread has involved the interlacing of economic and cultural activity. Rather confusingly, globalization is also used by some to refer to the efforts of the International Monetary Fund (IMF), the World Bank and others to create a global free market for goods and services. This project, while being significant – and potentially damaging for a lot of poorer nations – is really a means to exploit the larger process. Globalization in the sense of connectivity in economic and cultural life across the world, has been growing for centuries. However, many believe the current situation is of a fundamentally different order to what has gone before. The speed of communication and exchange, the complexity and size of the networks involved, and the sheer volume of trade, interaction and risk give what we now label as “globalization” a peculiar force.

The theory of Globalization involves the diffusion of ideas, practices and technologies. It is something more than internationalization and universalization. It isn’t simply modernization or westernization. It is certainly isn’t just the liberalization of markets. Anthony Giddens (1990) has described globalization as the intensification of worldwide social relations which link distant localities in such a way that local happenings are shaped by events occurring many miles away and vice versa.

Empirical Literature Review

Zouhair & Lanouar (2012) reviewed recent developments on the impact of trade liberalization on labor market in developing countries otherwise referred to as “DC”. Using the prediction of Heckscher Ohlin Stolper-Samuelson model (HOSS) model to reconcile theory with their empirical research, they asserted that some authors have tried to extend the traditional theory of international trade by relaxing one or more assumptions of model. Their research work focused more on discussion of the HOSS model concluding that the main message is that neither empirical nor theoretical research have advanced an explanation for the puzzle in the HOSS model application. By comparing the result of the impact of trade liberalization on labor market in the Latin America and the East Asian regions, they showed that differences in countries characteristics play a role to explaining the ways the traditional model of Heckscher-Ohlin can regain its predictive power in the determination of wage inequality or the changes of wages and the employment of the countries studied.

Anugwom (2007) examined the influence of globalization on labour utilization in Nigeria using the construction industry as a case study. Her discussion paper revealed that the era of globalization has given rise to profound changes in the way labour is utilized, specifically in terms of employment patterns as well as the related issues of earnings, job security, unionization etc. In effect, she asserted that the way the worker is used by the firms in the industry is determined solely by the dictates of capitalism, i.e. the profit motive. Her conclusion is that the consequences of globalization have been unfavorable to the workers in the so-called 'semi-skilled' category. Thus, neo-liberal globalization, contrary to the often-benevolent impacts attributed to it, has worsened rather than improved the situation of workers in the construction industry in Nigeria. This, according to her, then calls attention to the need for inter alia a more focused regulation of the activities of Multinational Corporations (MNCs) and the enforcement of minimum ILO standards in member countries, especially in the developing world where the need to attract the all important foreign investment may override any other consideration.

Nwaka, Uma & Tuna (2015) in the wake of the global financial crisis studied unemployment rates and openness to trade in developing countries. Their study analyzed the impacts of trade policy on unemployment rates in Nigeria. Using time series data from 1970 to 2010, they adopted the vector error correction methodology. In order to explore the impact of a range of variables on the relationship between trade openness and national unemployment rates, these variables, in a system of equations, include measures of trade openness, public recurrent spending on education, foreign price shocks and real gross domestic product or alternatively income per capita. Their findings revealed that in the long run, real output and income per capita led to a decline in unemployment, but trade openness policy is associated with an increase in unemployment. Foreign policy shocks, as proxied by commodity prices, also exert a positive effect on unemployment rates and do not contribute subsequently to restoring the system to equilibrium. However, they also found that initial impact of openness and foreign price shocks captured by short-term dynamics are observed to reduce unemployment. They recommended among other things that Nigeria has to embark on necessary reforms and adopt policies relevant for repositioning the economy before it can enjoy the benefits associated with trade openness.

Identified Gap in Empirical Literature

A cursory examination of the empirical review shows that previous research works centered on either globalization or trade liberalization; none of the works focused on both economic concepts in a single study. For example, Onyeonoru (2013) examined the impact of the neo-liberal globalization of African economies while Obayelu (2007) studied the effects of economic globalization on employment trend and wages in Nigeria. A study of the combined effect of globalization and trade liberalization on the labour market is seen as a huge gap in literature which this study intends to fill.

Also, the use of econometric models to evaluate the relationship between globalization and trade liberalization on labour is conspicuously lacking in the economic literature reviewed. Few of the reviewed works centered mainly on globalization using content analysis and discussion method in their analysis. Only Odejimi & Odejimi (2015) studied the impact of trade liberalization on the Nigerian labour market using the ordinary least square technique to formulate a model. Thus, there exist very few analytical literature, to the best of our knowledge, on the relationship between globalization and trade liberalization on labour in Nigeria. This creates a very wide gap which this study intends to fill by way of establishing a linear relationship between globalization and trade liberalization on labour market and consequently, using the Error Correction Model technique to analyze the data gathered for the study.

Again, the time frame of the study is updated from 1980 to 2018 as against previous research works which mostly ended in 2016. The time gap in previous studies coupled with the variables gaps are to be filled in this study.

3.0 Research Methodology

The research design employed in this research is the *ex-post facto* research design. *Ex-post facto* research is a systematic empirical inquiry in which the scientist does not have direct control of independent variables because their manifestations have already occurred or because they are inherently not manipulated.

The data used in the estimation are time series and annual in nature. The data are sourced from the Central Bank of Nigeria Statistical Bulletin (2018 Edition), National Bureau of Statistics (NBS) Statistical Bulletin and Annual Abstracts and the World Bank Development Indicator, WDI (2018). They were subjected to stationary/unit root test using the Augmented Dickey-Fuller (ADF) unit root test to ensure their stationarity at levels or be made so through differencing, to avoid spurious regression (Egbulonu, 2019). Moreover, to confirm the existence or otherwise of the long-run relationship among the variables, Johansen co-integration (Johansen, 1991) tests were carried out and 5% level of significance was adopted to guide decisions on these tests.

Also to ensure that there is no autocorrelation between the error terms, a test of autocorrelation was carried out using Durbin-Watson techniques and other diagnostic tests were carried out to ensure high quality results,. Furthermore, error correction model (ECM) technique was adopted to estimate the coefficients of the model.

The Error Correction Model (ECM) is an extension of the Ordinary Least Square regression model where the former is used when the time series are I(1). However, the ECM is useful for estimating the short-run and long-run speed of adjustment of one time series on another.

3.1 Model Specification

Based on the traditional HOSS model, increased openness to trade is expected to increase the balance of trade outcome and this ultimately leads to increase in employment in the local economy. The theoretical postulation of the HOSS model is expected to favour skilled workers in Nigeria by way of increasing the rate of employment occasioned by increase in globalization and liberalization of trade over a specified period of time.

This study formulates a unique model which is a modification and extension of the model in the empirical work of Odejimi & Odejimi (2015). Odejimi & Odejimi (2015) established a linear relationship between trade liberalization and the Nigerian labour market by focusing on only two variables namely trade openness and unemployment rate.

However, this study modifies the model of Odejimi and Odejimi (2015) by estimating a relationship between globalization/trade liberalization on labour by using trade openness, balance of trade, import duties and exchange rate as explanatory variables. Labour force is the dependent variable. The model is formulated thus:

$$LABF = f(\text{Globalization and Trade Liberalization}) \quad \ldots(3.1)$$

However, given that:

$$\text{Globalization and Trade Lib} = F(TRAOP, BOT, IMPD, EXCHR) \quad \ldots(3.2)$$

Where TRAOP, BOT, IMPD and EXCHR are the globalization and trade liberalization indices introduced in the model as an extension of previous models, we substitute for globalization and trade liberalization and obtain the functional relationship thus:

$$LABF = f(\text{Trade Openness, Balance of Trade, Import Duties, Exchange Rate}) \quad \ldots(3.3)$$

The Linear Form of the Model is stated thus:

$$LABF = a_0 + a_1TRAOP + a_2BOT + a_3IMPD + a_4EXCHR + U_t \quad \ldots(3.4)$$

Where:

LABF = Percentage change in labour force (year to year)
TRAOP = Trade Openness
BOT = Balance of Trade
IMPD = Import Duties (percentage contribution of import duties to total tax revenue)
EXCHR = Exchange Rate (Naira to US Dollar)
U_t = error term,
$a_0 - a_4$ are the unknown parameters of the model to be estimated.
The a-priori expectation of the model is such that $a_0 - a_4 > 0$. i.e. the globalization and trade liberalization indices are expected to have positive and increasing effect on Nigeria's labour force over the time period studied.

4.0 Data Analysis and Interpretation

Pre-Estimation Test Results

Table 4.1 below reports the results of the unit tests results using the Augmented Dickey Fuller (ADF) unit root test. The test is summarized as follows:

4.2.1 Unit Root Test

Table 4.1: Summary of Unit Root Test Result

		ADF Test statistics			
Variable		**At Level**	**1st Difference**	**Decision**	**Order of Integration**
LABF		1.082795	-4.290785	Stationary at 1st difference	I(1)
TRAOP		-1.791197	-7.024925	Stationary at 1st difference	I(1)
BOT		-1.507115	-3.584295	Stationary at 1st difference	I(1)
IMPD		-1.327377	-6.313490	Stationary at 1st difference	I(1)
EXCHR		1.933428	-4.220484	Stationary at 1st difference	I(1)
Critical Values	1%	*-3.670170*	*-3.689194*		
	5%	*-2.963972*	*-2.971853*		
	10%	*-2.621007*	*-2.625121*		

Source: Researchers' Computation using E-Views 9.0

The unit root test above reveals that the variables are stationary at first difference, which implies that variables are integrated of order one, I(1). Based on this result, we can test for the existence of a long-run relationship amongst the variables, i.e. cointegration.

4.2.2 Johansen Cointegration Test

Table 4.2: Johansen Cointegration Test Results

Trace Statistic					**Max-Eigen Statistic**		
Hypothesized No of CE (S)	**Eigen-Value**	**Trace statistics**	**5% Critical Value**	**Prob****	**Max-Eigen statistics**	**5% Critical value**	**Prob***

None *	0.657896	86.1618	69.8189	0.0014	39.68764	33.87687	0.0091
At most 1	0.508263	46.4741	47.8561	0.0670	26.26301	27.58434	0.0730
At most 2	0.310112	20.2111	29.7971	0.4086	13.73537	21.13162	0.3872
At most 3	0.129942	6.47574	15.4947	0.6393	5.150249	14.26460	0.7228
At most 4	0.035190	1.32549	3.84147	0.2496	1.325491	3.841466	0.2496

Note: **Trace test indicates 1 cointegrating eqn(s) at the 0.05 level
**Max-eigenvalue test indicates 1 cointegrating eqn(s) at the 0.05 level
Source: Researchers' Computation using E-view 9

The result of the Johansen cointegration rank tests presented in Table 4.2 above shows that the Trace and Max-eigen statistics indicate one (1) Cointegrating equation at the 5% level. The existence of at least 1 cointegrating equation(s) in the model is an indication that there exists a long-run relationship between globalization and trade liberalization variables and labour market in Nigeria. In effect, the influence of globalization and trade liberalization has long term implications on the labour market in Nigeria. Below is the estimate of the short run relationship between labour market and globalization/trade liberalization indices as well as the long run speed of adjustment.

4.2.3 Error Correction Model Estimation

The study proceeded with the estimation of the Error Correction Model which was developed by Engle and Granger to reconcile the short-run behavior of globalization/trade liberalization with its long-run behavior, and to investigate the adjustment mechanisms towards the long-run equilibrium represented by the cointegration relationship. The result is summarized below:

Table 4.3: Error Correction Model Result

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1.479780	2.722451	-0.543547	0.5928
TRAOP	0.055701	0.034658	1.607152	0.1237
BOT	-2.064405	0.000191	-0.108019	0.9151
IMPD	0.041988	0.008158	5.146850	0.0147
EXCHR	-0.013684	0.001989	-6.879839	0.0022
ECM(-1)	-0.505361	0.127786	3.954745	0.0490

R-squared	0.721833	Mean dependent var	1.517573
Adjusted R-squared	0.677291	S.D. dependent var	2.514701
Durbin-Watson stat	1.962429	Akaike info criterion	4.556609
F-statistic	2.918419	Schwarz criterion	4.846939
Prob(F-statistic)	0.038832	Hannan-Quinn criter.	4.640214

Source: Researcher's Computation using E-View9

The Error Correction model equation is therefore specified as follows:

*LABF = -1.4798 + 0.0557*TRAOP - 2.0644*BOT + 0.0420*IMPD - 0.0137*EXCHR - 0.5054*ECM(-1)*

4.3 Interpretation of Results

The unit root test showed that the variables are integrated of order 1 i.e. I(1) thereby giving the possibility of co-integration amongst the variables. The first order stationarity of the data means that the statistical properties of the data are constant and do not vary over time hence we ascertain their long run properties using Johansen (1988) co-integration test technique. The results of Trace Statistic and Max-Eigen Statistic tests gave the green light to apply the Error Correction Model (ECM). The cointegration results permits to test and estimate short and long run relationships between variables using the ECM approach which also helps to solve the spurious correlation problem among economic variables. The co-integration test showed that there is a long relationship between globalization and trade liberalization on labour in Nigeria.

The estimates of the model using the Error Correction Model revealed that trade openness and import duties both have positive and direct relationship with labour force in Nigeria increasing labour force by 0.0557 and 0.0419 units respectively. However, Balance of trade and exchange rate have negative and indirect relationships with labour force decreasing it by 2.064 and 0.0137 units respectively.

The Error Correction Model (ECM) coefficient is estimated at -0.505362. This means that the globalization/trade liberalization – labour market model corrects its previous period's disequilibrium at a speed of 50.5% which is approximately 51% annually. What this implies is that given a steady state of increase in trade liberalization drive and globalization indices in the Nigerian economy by 51% annually, the labour market will experience a positive surge and will most likely attain equilibrium in the long run, all things being equal. As a result, the findings confirm the positive effect of globalization and trade liberalization in increasing the labour force in Nigeria.

4.4 Post-Estimation Test Results

Table 4.4 below shows the post estimation test results which comprised of the Durbin Watson test for autocorrelation, Cumulative Sum test summary and the Coefficient of determination (R-squared and Adjusted R-squared. These tests are necessary in order to ascertain the statistical robustness and predictive ability of the model. They are summarized as follows:

Table 4.4: Diagnostic Tests

S/N	Test	Probability	Decision
1.	Durbin Watson Statistic	1.962429	No Autocorrelation
2.	Breusch-Pagan-Godfrey Heteroscedasticity Test	0.0008	No Heteroscedasticity
3.	CUSUM Test	CUSUM curve is within bands of 5% significance level	Model is Stable
4.	R-squared Adjusted R-squared	0.721833 (72%) 0.677291 (68%)	High explanatory coefficient

Source: Extracted from E-Views 9.0 output (See Appendix)

The post-estimation tests as presented in table 4.4 above shows that the model is free of serial correlation of the error terms given the Durbin Watson statistic value of 1.962 which suggests that there is no autocorrelation in the model. Furthermore, the Breusch Pagan Godfrey Heteroscedasticity test indicates that the variance or errors are the same over the sample period, as indicated by the p-value hence there is no Heteroscedasticity in the model.

The cumulative sum (CUSUM) test shows and affirms the stability and suitability of the model for forecasting since the CUSUM line is within the upper and lower bounds 5% critical value lines (See Appendix).

Finally, the adjusted R-squared value of 0.7218 indicates that the explanatory variables account for up to 72% of the variations in the labour market in Nigeria. This represents a very good fit.

Test **of Research Hypotheses**

Table 4.5: Summary of Hypotheses Test

Hypothesis	t-statistic	Probability Value	t-table	Decision Rule
H01	1.6072	0.1237	1.960	Accept null hypothesis (H_{01})
H02	-0.1080	0.9151	1.960	Accept null hypothesis (H_{02})
H03	5.1469	0.0147	1.960	Reject null hypothesis (H_{03})

H04	-6.8798	0.0022	1.960	Reject null hypothesis (H_{04})

Test of Hypothesis One
H_{01}: There is no significant relationship between trade openness and the labour force in Nigeria.
t-statistic = 1.607152
p-value = 0.1237
t-table = $t_{0.025,24}$ = 2.064
Decision Rule: Since the t-statistic is less than the t-table value at 5% level of significance, we accept the null hypothesis and conclude that there is no significant relationship between trade openness and labour force in Nigeria.

Test of Hypothesis Two
H_{02}: There is no significant relationship between balance of trade and labour force in Nigeria.
t-statistic = -0.108019
p-value = 0.9151
t-table = $t_{0.025,24}$ = 2.064
Decision Rule: The t-statistic is less than the t-table value at 5% level of significance; therefore, we accept the null hypothesis and conclude that there is no significant relationship between balance of trade and labour force in Nigeria.

Test of Hypothesis Three
H_{03}: There is no significant relationship between import duties and labour force in Nigeria.
t-statistic = 5.146850
p-value = 0.0147
t-table = $t_{0.025,24}$ = 2.064
Decision Rule: The t-statistic is greater than the t-table value at 5% level of significance; therefore, we reject the null hypothesis and conclude that there is significant relationship between import duties and labour force in Nigeria.

Test of Hypothesis Four
H_{04}: There is no significant relationship between exchange rate and labour force in Nigeria.
t-statistic = -6.879839
p-value = 0.0022
t-table = $t_{0.025,24}$ = 2.064
Decision Rule: Since the t-statistic is greater than the t-table value at 5% level of significance, we reject the null hypothesis and conclude that there is a significant relationship between exchange rate and labour force in Nigeria.

Discussion of Results/Findings
This research empirically investigated the impact of globalization and trade liberalization on labour market in Nigeria, using the Error Correction Model (ECM) approach. Specifically, the paper aimed at examining the short-run effects of globalization and trade liberalization on the labour market in Nigeria for the period 1990 to 2018.
The statistical properties of the time series data were examined through unit root test using Augmented Dickey-Fuller Unit root test. The results show that all the variables are integrated of order one, i.e. 1(1). This necessitated the test for long run relationship amongst the variables using the Johansen Cointegration test. The result established the existence of a long-run relationship between the dependent and independent variables. This implied that globalization and trade liberalization have long run effect on labour market in Nigeria.

Consequently, the estimates of the model using the Error Correction Model revealed that trade openness and import duties both have positive and direct relationship with labour force in Nigeria increasing labour force by 0.0557 and 0.0419 units respectively. However, Balance of trade and exchange rate have negative and indirect relationships with labour force decreasing it by 2.064 and 0.0137 units respectively.

The positive effects of trade openness and import duties on labour force is an indication that the ratio of Nigeria's total trade to GDP has improved employment prospects in Nigeria by increasing labour force. Trade openness being one of the key indicators of globalization and trade liberalization has attracted investors into the Nigerian economy which has helped to create new employment opportunities for the teeming population in Nigeria. This was in contrast with the findings of Anugwom (2007) who concluded that the consequences of globalization have been unfavorable to the workers in the so-called 'semi-skilled' category. The contrast in the findings is adduced to the use of skilled workers only in this study which is as published in the World Bank data base for Nigeria. Similarly, Obayelu (2007) posited that globalization of the Nigerian economy through various economic reforms, deregulation and privatization had led to downsizing of employment in civil service thereby compounding the widespread job queuing in Nigeria. This study found contrary view to this as it has incorporated recent data which has shown otherwise thus annulling the findings of Anugwom (2007) and Obayelu (2007).

Furthermore, import duties on the other hand has increased government tax revenue and has similarly led to more employment ventures through government increased expenditure in various sectors of the economy. Balance of trade and exchange rate being negative implies that Nigeria's imports exceeds her exports and as such local manufacturers are not being encouraged leading to loss of jobs and a decreased labour force. Exchange rate fluctuations is not favorable to the labour market owing to the increase in cost of importation of some raw materials which most small scale businesses cannot afford leading to winding up of businesses and decreased labour force.

The Error Correction Model (ECM) coefficient indicated that the globalization/trade liberalization – labour market model corrects its previous period's disequilibrium at a speed of 51% annually. This implies that given a steady state of increase in trade liberalization drive and globalization indices in the Nigerian economy by 51% annually, the labour market will experience a positive surge and will most likely attain equilibrium in the long run, all things being equal. As a result, the findings confirm the positive effect of globalization and trade liberalization in increasing the labour force in Nigeria. However, the study of Odejimi & Odejimi (2015) found contrary view to this as they held that trade liberalization has had negative impact on the Nigerian labour market leading to Nigeria becoming a dumping ground for cheap products from industrialized countries like China which adversely affected domestic manufacturing companies.

5.0 Conclusion and Recommendations

This study examined the impact of globalization and trade liberalization on labour market in Nigeria. To achieve the avowed objectives of the study, the necessary literature were reviewed- conceptually, theoretically and empirically. Some major flaws of the reviewed empirical works were identified and the research gap identified. The study utilized some time series properties including the unit root, co-integration and error correction modeling technique to estimate the short run relationship between globalization/trade liberalization and labour force in Nigeria.

Following the findings made, the study came to a conclusion that globalization and trade liberalization have had a positive effect on the labour market in Nigeria, specifically; trade openness and import duties have increased the labour force in Nigeria from year to year thereby leading to increased production and growth of the economy. The expected impact of globalization and trade liberalization on labour force in Nigeria confirms the fact that globalization/trade liberalization has had a multiplier effect by increasing labour force and output of other economic sectors.

Based on the findings, the following recommendations are made:

1. Since trade openness and import duties, which are key indices of globalization and trade liberalization, contribute immensely to increase in labour force in Nigeria, further measures should be put in place to attract foreign investors in Nigeria by way of encouraging our local manufacturers and openness to

trade so as to increase the contribution of import duties to government total revenue and ensure that local businesses improve.
2. Nigeria must develop its own domestic technologies so as to be able to enjoy the full benefits of globalization just like other developed economies.
3. Nigerian government need to cushion the most vulnerable groups against globalization's adverse effects. Mitigating the adverse effects of globalization includes providing basic social security, retraining workers for growing sectors and improving access to education and credit.
4. The various establishments in Nigeria need to increase their access to foreign markets by increasing production and sourcing for new technologies. This is made possible through globalization and trade liberalization which has removed certain barriers to trade.

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