THE IMPLICATIONS OF FREE TRADE AREA FOR POVERTY, HOUSEHOLD WELFARE AND ECONOMIC DEVELOMENT IN NIGERIA

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ABSTRACT
ReducingPoverty and increasing household welfare remain among the major socio-economic problems confronting most developing countries especially sub-Sahara Africans which demand policy measures to tackle it. The relevance for free trade area as one of the economic policies to promote welfare and reduce poverty among nations is gaining momentum globally especially the continent of Africa. Given the paucity of studies on this area, the study was undertaken as a framework to determine what the implications of free trade areas will be within the African continent. To achieve this, a fully modified least squares (FMOLS) regression technique was employed to estimate time series data drawn from central bank statistical bulletin spanning the period 1991 to 2017. Econometric view statistical software version 7 was used. Study revealed that free trade scenarios contributed positively to the welfare of individual as well leading to reduction of unemployment. It is recommended based on findings, that policy makers should focus more on policies that will promote foreign direct investment, export contributions to growth and simplification of trade regulations so as to further improve on the positive gains of free trade area on the households' welfare, and poverty in Nigeria.
Keywords: Households, Poverty, Unemployment, Welfare.
JEL Classification: F1, F2, F4, F6

1. INTRODUCTION
Eradicating poverty, promoting household's welfare and economic development have remained the dominants objectives and major concerns to every government most especially developing nations, including Nigeria. The economies of most countries from the Africa region are characterized by the aforementioned problems. This requires governments of most countries to ceaselessly formulate numerous policies that are capable of re-organising its politics, economics and social institutions for advancing welfare and economic development. In spite of these monumental policies, most African countries poverty index still lag behind global poverty line. The income per capita among individuals in the African countries remains abysmally low which indicate poor living standard and low hygienic condition and consumption of low nutritional foods. The worst scenario is the poor institutional

transformations which may mitigate the competitive performances of the various sectors of the economy to participate in international trade creditably. Nigeria economy is not exempted from the poor living standard bedeviling the continent as evidenced from its recent per capita income of US$1,809 and total output of US$2,450 billion central bank of Nigeria (CBN) (2017). Most Nigerians lack basic amenities like house, hygienic water and adequate consumption of nutritional foods, faced with precarious health system and accessing health is very cumbersome to them. Low infrastructural developments such as roads remain dead traps thereby undermining the importance of transportation to the African economies.

The epileptic supply of electricity is another frustration bedeviling the industrial sectors of the economy thereby impacting adversely on the competiveness of the economy. The fiscal policies in the area of taxation is another limiting factors to the competitiveness of the industrial sectors most especially the small and medium enterprises, which in turn affecting the wellbeing of economy. Lending rate of interest remained one among the major constraints to investors which limit the investments undertakings and the entrepreneurial ability. This has the tendency of leading to active participation of investors in the manufacturing activities as one of the index that measure the competitive strength of an economy to fully benefit from free trade area. Eradication of poverty, increase in welfare of the households and the overall growth of an economy may be difficult for nation whose domestic economy competitive strength is weak. Of recent, most countries including Africa nations have discovered the need for free trade area which may entails the abolition of all or at least the relaxation of some trade restrictions among member countries as a universal remedy for stimulating hailing economies. This is with the view to lifting the countries from abject poverty, promoting households' welfare and enlivening overall economic development in the continent.

However, the case of Nigeria differs because despite the rich natural and human resources the country is blessed with, its trades with other countries with all kinds of restrictions have not shown an increasing progress that reflects on the poverty, wellbeing and development of its economy. Therefore, it becomes very urgent to explore what the implications of ratifying the agreement of free trade in the African continent will be on the Nigeria economy given the level of its competitive strength which is put at about 47.0 percent and making it 16th position. This makes it came after the most fifteenth (15th) competitive economies in Africa as indicated in the competitive ranking of 44 African countries economies(World Economic Forum,2017). The low performance index is an indication of poor feat of Nigeria market. This casts doubt on the country expectation if involved in free trade area as pathway to evade abject poverty, increases households wellbeing and boosting economic development. Therefore, in the bid to determining the implications and impact of trade policy reforms on rural poverty in Nigeria, it was discovered that trade liberalization policy led to reduction of real wage and income as well as further deterioration of rural inequality (Busari & Omoke,2005). The relationships between income per capita as the outcome variable which measures the poverty index and indexes like foreign direct investment, export contributions to gross domestic product were not explicitly captured in their model. though, in another study, adverse relationship between disaggregated per capita incomes(industrial and agricultural sectors), total labour force as the dependent variables and trade liberalization represented by terms of trade, exchange rate, foreign reserve, domestic price index, and trade openness among the explanatory variables were documented((Balogun & Dauda, 2012). To bridge this gap, this study sets out to evaluate the preparedness of Nigeria economy to optimally participate in continental free trade so as to alleviate poverty, promote the household welfare and stimulate the development of its economy. To achieve this, fully modified ordinary least regression method was employed to permit the determination of the relationship between poverty which is measured by the income per capita of the households and the export contribution to growth.

2. LITERATURE REVIEW

Free trade implies having sub regional, regional and continental trade agreement whereby goods and services can be exchanged without some underlying restrictions to trade among nations. The proponents(Heckscher-Ohlin,(1933); Ricardo, (1956) ; and Krugman(1993) of free trade doctrine starting from the absolute, comparative advantage to New trade Theory believed that when goods are traded amongst nations it will foster economic growth and prosperity of trading among partners. Though, the underlying aim is to achieve efficiency of resource use and competitive production base. Efficiency of resource employment is based on the fact that labour abundant countries produce labour intensive goods to exchange for capital intensive goods. It is expected that the competition for superior position in the international market will push developing countries like Nigeria to adopting and developing new technology. All these are expected to bring about value additions which are critical for creating linkages in the employment generation, income gains and reduction in poverty prevalence.

The poor can benefit from trade if the prices of commodities they consume are reduced and prices of what they produced are increased (World Bank, 2018). In a nutshell, trade can impact on national economy by reducing the cost of products that are not domestically available at reasonable prices and increase quality and variety of such economic consumptions in the market place. The pursuit of policy of trade liberalization seems to be related to the pursuit of sustained growth as evidence from some countries like Taiwan, Brazil, China, India, and Poland experiences during their trade reforms (Douglas, 2019). In this development, Nigeria had turn around economic policy plan covering 2017 to 2021 to achieve sustainable growth with focus on the policy of industrialization, export orientation and improved economic competitiveness. This has become necessary owing to the fact that Nigeria and other African continent lays behind in the global market performance due to low industrialization. It hoped that with more outward trade orientation, the Nigerian economy will increase its national income, and hence reduced poverty incidence. It is believed that dismantling of trade restrictions among nations in the Africa International Trade and Commerce Research(AITCR) report leads to regional integration that boosters economic transformation and investments which could enable poverty reduction in the region (AITCR, 2018).

2.1 Conceptual Clarifications of Free Trade Area

The coming together of group of countries to form trade alliance such that all forms of trade restrictions by international community are removed and leading to establishment of common custom unions among countries is referred to as free trade area (Krueger, 1995). The removal or adoption of common trade restrictions within regional economic community remain the precursors for the continental integration. To increase regional cooperation among member countries so as to have free flow of goods and services with no or less restriction, countries like Nigeria began to have a new trade policy thinking that will promote welfare of the people and reduce poverty in their midst. That led Nigeria to become a member of Economic Community of West Africa States with benefits of average tariff on imports of 5.60 from the member trading blocs (AITCR, 2018). With free trade, the high barriers with average protection of 8.7% faced with African countries will further reduce (Marcel & Karingi, 2012). It is documented from the principle of comparative advantage that free trade leads to higher level of output and income than state of autarky (Jing & Yuduo, 2011)

2.2 Poverty

Poverty is used to describe the condition whereby individuals or some group of people lack or have limited access to the means of livelihood. It is also considered to be a situation where
families do not have sufficient cash, income to secure foods, shelter and clothing (Atkinson, 1989; Webster, 1989; Smith, 19994 and Khalid, 2003). It is as well perceived as material condition which occurs when income level of individuals become too limited to cover basic living condition, social

needs (Enberg-Pedersen & Ravnborg, 2010). In Nigeria, poverty can be concluded to be everywhere as the education which is generally regarded to improve employability of labour, increase income and ultimately reducing poverty can no longer perform these cardinal roles. Ajakaiye and Adeyeye(nd) perceived poverty as a situation that affect individual's moral and psychological state resulting from insufficient income to meeting basic needs. This means the individual lack ability to meet social and economic obligations given the lack of gainful employment, skills, assets and self-esteem, and his limited access to social and economic infrastructure such as education, heath, portable water, sanitation, and so on(Adegbemi, Babatunde & Ogundajo,2019).

2.3 Economic Development and Poverty

To Sen (1999), to strengthening the individuals' autonomy and have substantive freedom, which allows individuals to fully participate in economic life is referred to as economic development. It is also be regarded as a situation that enables individual agents to explore all the necessary opportunities to develop their capacities and actively participate in the nation's economic activities (Feldman, Hadjimichael, Kemeny & Lanaham, 2014). The challenges confronting Nigerian economic development is lack of economic participation by the labour force. This further explains why economic growth is not the same as economic development as many periods of economic prosperity in Nigeria do not translate to stemming poverty, economic transformation, employment creation and sustainability. It has to do with the has to do with structural transformation that is capable of removing poverty, hunger, poor health and enhancing accessing to basic infrastructure (Narayan, Patel, Schafft, Rademacher & Schulte, 2000). According to Feldman, et al. (2014), economic development is about placing the nation on the higher growth trajectory. It concerned with structural transformation, knowledge development, transfer, and infrastructure improvement which can be brought about through efficient interactions between the public and private sector. Free trade area imply that both tariff and non-tariff barriers inhibiting the optimal performance of countries especially the developing countries in the international market. According to UNCTAD (2014), exportations of agricultural produce from less developed countries are faced with average tariff of 5 percent and non-tariff trade restrictiveness of 27 percent. The non-tariff includes the sanitary and plytosamitory measures and technical standards which increasingly restrict export flows from the less developed countries. Free trade area brings about high degree of trade openness which permits international trade among partners' countries.

WTO and World Bank (2018) documented that trade is expected to impact on wellbeing of individual nation's economy and the reduction of poverty. Nigerian cannot develop its resources to full potential without fully integrated in the regional and continental trade agreement to attain free trade area. Trade liberalization leads to the wellbeing of a nation and expansion of markets through the removal or reduction of trade barriers among partners (UNCTAD, 2018). Nigeria imports most important goods into the economy, consumer-goods and producer-goods alike. This implies that the existence of a common market between trading partners, leads to the reduction of the cost of producing and price of consuming final goods which translates to welfare gains and poverty reduction. Trade brings about specialization which is imperative to development of every nation's economy including Nigeria. The gains of free trade area are critical to economic development in Nigeria but efforts should be made to create atmosphere for both domestic and foreign private investment through diversification and capacity building to enhance innovation and competitiveness within the domestic economy. Reduction in trade barriers would not benefit all Africa countries on the equal population as welfare gain will be more accrued to the countries with most open economies (Abrego, et al. 2019).

2.4 Empirical Review

Free trade area has been observed to contribute significantly to the promotion of economic growth, poverty reduction and economic growth, as document ted by several empirical studies with mixed

findings. Mohler, Weder, and Wyss (2018) investigated the nexus between international trade and unemployment in Switzerland. Their study made us of panel data covering 1991 to 2014 and employed liner probability model (OLS) and logit model, their findings revealed no positive relationship between import competition and employment of low-skilled individuals. In another study, Tanyi (2015), analysed the benefits and unexploited trade potentials of African regional markets. He utilized an augmented multi-linear gravity model regression analysis and discovered that there are projected gains to be generated from the establishment of Pan-African Continental Free Trade Area (PACFTA). Jensen and Sandery (2015) examined regional integration and intra-African trade barriers reductions using simulation approach. Their findings revealed that tariff elimination on intra-African trade are promising but concluded that free trade agreement with selected African
Countries indicate that it is second-best option. Similar conclusion was reached on the study undertook by Marcel and Karingi (2013) where they estimated the effect of removal of tariffs on intra-African trade among African countries using CGE (computable general equilibrium)
model. In their study, they established that the share of intra-Africa trade will increase from 10.2 percent in 2011 to 15.5 percent in 2022. Contrarily, Balogun and Dauda (2012) established a negative inverse between trade liberalization and price incentives which theoretically is believed to stimulate domestic production. However, the authors remarked that in the long run, trade liberalization would lead to rise in world real income. They claimed that the middle income countries will have a share of 0.5 percent, and the least developed countries by 0.8 percent. Abrego, Amado, Gursoy, Nicholls, and Perez-Saiz (2019) estimated welfare effects of African continental free trade areas for 45 countries. The authors utilized multi-country and multi-sector general equilibrium model and discovered that partial and substantial reductions in non tariff barriers will result in worthy gains from trade liberalization in Africa.

To estimate the effects of international trade on the unemployment, Kim (2011) utilized panel data from twenty (20) OECD countries and discovered that increase in trade brings about a higher aggregate unemployment due to its interaction with rigid labour market institutions. However, the study of Kim also posited that trade may reduce unemployment if there exist flexibility in the labour market institutions thereby concluded that rigidities in labour market act as antithesis to employment creation through international trade. In another development, Fugaza et al. (2014) analysed the policy issues and simulated discussions in the area of international trade and development. Their study used panel data covering the period of 1995 to 2009 from 97 countries to assess the relationship between openness to trade and unemployment. The authors discovered that effect of international trade unemployment could either be positive or negative depending on the direction of the covariance of comparative advantage and sector level of labour market functions existing in the economy. The authors asserted that trade and unemployment could be positive if there is positive covariance or otherwise. In the study of winter (2014), the relationship between international trade regulation and job creation was investigated. The author utilized correlation analysis to determine the relationship between labour force participants and export plus import in gross domestic product data within the period 1990 to 2012 and submitted that trade policy do not have much impact on unemployment. He further remarked that there are differentials in the impact of policy of trade from one country to another.

Emmanuel et al-(2020) investigated the tripartite relationship between trade openness, foreign direct investment and the performance of the Nigerian economy. Their study applied macro-econometric model to estimate the secondary data, their findings revealed that trade openness attracts foreign direct investment and affects macro-economic performance of Nigeria. They documented that increased trade openness, foreign direct investment (FDI) government expenditure and broad money supply led to the increase in private investment, real consumption.

In other study, Gbatasoron, Victor, Simeon, Sunday and Joseph (2020) examined the accuracy of Ricardian theory of comparative advantage in Africa in the 21st century. Their study used system general method moment (GMM) and discovered that the theory is theoretically plausible but empirically lack strong evidence in Africa. Therefore, concluded that international trade is beneficial but Africa countries have not significantly benefited from the trade. Paul (2020) investigates the impact of the domestic demand-led growth strategy on household welfare in Nigeria. The study employed general computable equilibrium (GCE) model to determine the effect of trade restriction and non-trade restriction scenario and documented that both households lose welfare under two trade scenario but the impact was discovered to be more when the rate of restriction is higher.
Okonta, Mobosi and Uwgu (2020) examined the impact of trade liberalization and export dependence on export diversification in Nigeria. They employed short-nun error correction model (ECM) and found that trade liberalization has negative but insignificant impact on diversification, while foreign direct investment, gross national expenditure and financial development positively and significantly impacted on export diversification in Nigeria and suggested for the strengthen of the free trade zone to reap the benefit of export diversification.

In related study, Adeyele and Ouedraogo (2019) analysed the impact of regional financial integration and governance quality on economic growth in West Africa. Their study used system generalized methods moment (SGMM) and discovered that financial integration and governance quality do not support economic growth in ECOWAS.

3. METHODOLOGY

3.1Theoretical Framework

In studying the implications of regional integrations or free trade area, theorists, (Plummer, Cheong, and Hamanaka, 2010; Kinnman and Hagberg, 2012; Joan, 2017) have found the Computable General Equilibrium (CGE) and gravity model to comprehend effects of Trade Agreements. The CGE model focused on the study of welfare effects of trade agreement (whether free or partial trade restrictions) among countries. Plumer et al. (2010) pointed out significant of CGE model in the determination of free trade implications which include among others, the consistency with microeconomic theoretical framework, and production of quantitative results that enabled the policy makers to identify those that benefits and lose from free trade area/agreement. By so doing, the proponents of CGE model documented the possibilities of studying welfare implications via factors returns(wages, rents, profits and interest), trade volumes whether aggregated or otherwise such as imports, exports, economies of scales/imperfect competition and so on.

However, the gravity model according to Plumer et al. (2010) concerns with ex post effects of trade flow. This means that the gravity model is suitable to assess the implications of trade flow in a situation where it(free trade area agreement) had not been in practice so as to guide the policy makers on decision making relating to free trade area agreement. Tinbergen (1962) has been considered as the pioneer of gravity model where he compared the bilateral trade between two countries. It determines the import demands and made use of several explanatory variables like income of importing and exporting country, distances between countries and other variables thought to be relevant by the modeler (Plumer et al., 2010). Therefore, to measure the implications of free trade area, this study found gravity theory as the appropriate theoretical framework especially for forecasting effects of trade flows.
The econometric form of gravity model is represented as :

$$LnExp_{ijt} = \alpha_j + \gamma_j + \lambda_t + \beta_1 lnY_{it} + \beta_2 lnY_{jt} + \beta_3 DIST_{ij} + \ldots + \mu_{ijt} \text{ ---------- } (1)$$

Where:
Exp_{ijt} is the volume of trade (exports) from country i to country j at time t

Y_{it} is the gross domestic product (GDP) in country I at time t, and the same for Y_{jt} for country **j**.
$DIST_{ij}$is the distance between the countries i and j , i = 1, … N, j=1… i-1, i+1,…, N+1

3.2 Data

Time series data covering the period 1991 to 2017 was employed. Data relating to per capita income (PCI), export contribution to gross domestic product (EXPGDP), gross domestic product (GDP), unemployment rate (UNR) and foreign direct investment (FDI) were sourced from Central Bank of Nigeria statistical bulletin of 2018.

3.3 Method

To explore the implications of free trade area for poverty, descriptive (mean, standard deviation, skewnness and kurtosis) and inferential approach (fully modified ordinary least square) (FMOLS) technique were used to determine the implications of free trade area on the
welfare and poverty level in an economy.

3.4 Specifications of models

To realize the objectives of the study, we modified the Tinbergen (1962) gravity model and empirical propositions to specify two models; welfare and poverty proxied by per capita and unemployment that were utilised to investigate the implications of free trade area. The export contributions to gross domestic product, foreign direct investment, and per capita income of individuals and unemployment rate were variables deemed incisive from empirical evidence of to measure the degree of wellbeing derived from trades (Kim, 2011; Sabina & Eldin, 2018). Sabina and Eldin (2018) included tariff rate and domestic investment as the determinants of real gross domestic per capita in their model to access the implications of trade activities on welfare. Kim (2011) also modeled effects of trade on unemployment among 20 member countries of the Organization for Economic Co-operation and Development (OECD).

Implications of free trade area on poverty, per capita income (PCI) or the average income earned per person in a given country in a specified year becomes a very important index. The index allows comparison of income derived from various sectors of the economy such as export and foreign direct investment as well as wealth of different population. The incorporation of these indexes in the study helps to ascertain the level of development and readiness of a country(s) like Nigeria in Africa to sign into free trade area agreement. However, differential in countries purchasing power parity, inflation, level of skewness in income distributions and non-monetary activities may undermine the significance of per capita income as adequate measure of implication of free trade area for poverty.

In spite of the drawbacks, per capita income still remains above other indexes for measuring standard of living of populations in a given society.
In light of the framework, the functional and econometric relationships of the models are stated as thus:
Welfare =f (Free trade area) ---------- (2)
Where:
Welfare is proxied by Per capita income as the outcome variable.
Free trade area is represented by export contributions to gross domestic product (EXPGDP), foreign direct investment (FDI) and gross domestic product (GDP) as the explanatory variables.
On this basis equation 2 is re-specified as thus:
Welfare (PCI) =f(FDI,EXPGDP, GDP) ---------- *(3)*
Where:

PCI is the per capita income which is used as a measurement of households welfare resulted from the participation in trade. Per capita income is deemed important a measure of welfare
because the living standard or the wellbeing of the individual households can be determined (Hossain, Kamal, Halim, & Zayed, 2019).
FDI is foreign direct investment which measured the impact of growth per capita income is receiving so as to determine the policy implication of signing into free trade area agreement. Foreign direct investment (FDI) is found important in this study because is one of the economic activities that contribute to country trade balance and has implication on the welfare of the individual households through the improvement in incomes (Hossain, Kamal, Halim, & Zayed, 2019).

EXPGDP is the export contribution to gross domestic product. It is used to measure the impact and the contributions of trade activities to the growth per capita of individual households' welfare. This is to determine the implications of free trade area policy as entrenched in the African continental free trade area (ACFTA) which Nigeria government signed into.

GDP is the gross domestic product which measures the overall performance of an economy. It is employed in this study to determine indirect impact of trade on the welfare of the households through per capita income. This is in line with (Paul, 2010) study that dwelt on the relationship between gross domestic product and welfare in Denmark. The variables of this study were selected to measure degree of households' welfare implications of trade under existing trade restrictions policy so as to determine what the country stands to benefit under non restrictive trade policies among Africa countries.

Equation 1, implies that per capita income (PCI) is a function of export contributions to gross domestic product (EXPGDP), foreign direct investment (FDI), and gross domestic product (GDP) which is in line with Sabina & Eldin(2018); Abrego, Amado, Gursoy, Nicholls, & Perez-Saiz (2019).

To permit empirical analysis, equation 2 is formulated econometrically as thus:
$Welfare = \alpha_0 + \alpha_1 EXPGDP + \alpha_2 FDI + \alpha_3 GDP + e$ ---------- *(4)*
Where,
e is the error term which assumed to be normally distributed with zero and constant variance. It is employed to capture the effect of implications of free trade area for poverty that could not be captured by the parameters of the explanatory variables in the model.
A priori, $\alpha_1, \alpha_2, \alpha_3,$ are to be greater than zero.
To determine the poverty implications of free trade area, the following equation is specified thus:
Poverty =f(free trade area) ----------(5)
This implies that poverty is a function of free trade area. For estimation purposes, poverty is proxied by unemployment as the dependent variable and trade area to be represented by foreign direct investment(FDI) and export contributions to gross domestic product (EXPGDP). On this basis equation 5 is re-specified as:
$Poverty\ (UNR) = f(FDI + EXPGDP)$ ---------- *(6)*
Where:
Poverty is the outcome variables. It measures the poverty implications of free trade area and proxied by unemployment rate. This is in line with (Kim,2011; Mohler, Weder, and Wyss, 2018) who determined the poverty implications of free trade area using unemployment as their outcome variable.
PCI is Per capita income which in gravity model of Tinbergen (1962) is used as the gross domestic product but modified here as per capita income.
EXPGDP is contribution of export proceeds to gross domestic product.

FDI is foreign direct investment as described in the preceding paragraph
To give econometric content to equation 6, it was reformulated as thus:
$Poverty(UNR) = \beta 0 + \beta 1FDI + \beta 2EXPGDP + \mu$ ---------- *(7)*
Where,
μ is the error term, assumed to be normally distributed with zero mean constant variance. Other explanatory variables remain as defined under equation 6.
The parameters in model 7 viz; β1,and β2 are expected to have inverse relationship with the dependent variable (unemployment rate (UNR) proxied for poverty to indicate implications of free trade area on employment.

This study adopts step-by-step approach estimation in obtaining final estimates of the variables of study.
Step 1: This involves preliminary investigation of the stochastic properties of the variables especially the normality assumptions. This was done using the normality tests
(Skweness, Kurtosis and jarque-Bera).
Step 2: This involved the dertermination of statonarity of the variables using Augmented Dickey-Fuller (ADF) test of unit root and complemented by Phillip-perrron test. This was to ensure the data are stationary before obtaining estimates that are not spurious. The series were tested for stationarity at level I(0), that is integrated to order 0. It was discovered that stationarity was not achieved at level among most of the series. The data were subjected to first difference I(I) when a level of stationarity was established.
Step 3. This stage involves estimation of coefficients of the variables having established stationarity at first difference for all the variables utilizing fully modified ordinary least square (FMOLS) method.

4. RESULTS AND DISCUSSION OF FINDINGS

4.1 Presentation of Results

Table 1: Descriptive Statistics

	PCI	EXPGDP	FDI	GDP	UNR
Mean	1377.296	22.44852	3.49296	203.2859	4.07370
Median	1008.000	23.02000	2.01000	104.9100	3.95000
Maximum	3223.000	36.02000	8.84000	568.5000.	6.24000
Minimum	270.000	9.22000	0.09000	27.7500	3.42000
Std. Dev.	970.322	6.45966	2.65127	178.2900	0.69129
Skewness	0.4381	-0.11606	0.65658	0.69094	2.164247
Kurtosis	1.6950	2.71658	2.16053	1.98180	6.82553
Jarque-Bera	2.77957	0.150986	2.73275	3.31459	37.54187
Probability	0.249128	0.92729	0.25509	0.190653	0.00000

Source: Author's computations.

Table 1 is the summary (descriptive) statistics which shows that the means and medians value of the respective variables are almost the same, demonstrating even distribution except the PCI and GDP series. The deviation from the means depicted by the standard deviation indicates that the variable, unemployment rate (UNR) had the lowest standard deviation, followed by foreign direct investment (FDI) and export contributions to gross domestic product (EXPGDP). The income per capita (PCI) had the highest standard deviation which followed by gross domestic product. The values of the standard deviation of the respective variables are less than their respective means values, indicating non chances of volatility in the series. The skewness results revealed that EXPGDP is negatively

skewed with left long tail while PCI, UNR, and GDP are positively skewed with right tails. The results of kurtosis of PCI (1.7), EXPGDP (2.7), FDI(2.2), GDP(2.0) were approximately less than kurtosis 3.0(standard normal distribution) revealed platykurtic which flatters than normal distribution while value of 6.8 indicates that URN is leptokurtic(peaked than normal distribution large values of the Jarque-Bera test for normality indicates that errors are not normally distributed among the variables except the variable EXPGDP with J-B value close to zero (0.2).

To determine whether or not the data were stationary, the Augmented Dickey Fuller (ADF), and Phillip-Perron (PP) unit root test were employed. The results of the unit root test among the variables in the study are presented in table 2 and 3.

Table 2. Summary of ADF Results

Variable	Level	Prob.Value	First difference	Prob. Value	Order of Integration
PCI	-0.80334	0.4297	-3.229881*	0.003	I(1)
EXPGDP	-2.960235	0.006	-6.549474*	0.001	I(1)
FDI	-1.499815	0.1467	-5.970008*	0.001	I(1)
GDP	-0.304799	0.7631	-2.636033**	0.014	I(1)
UNR	-3.215202	0.0040	-3.902205*	0.001	I(1)
Asymptotic	Critical Values				
1%	-3.711457		-3.724070		
5%	-2.981038		-2.986225		
10%	-2.629906		-2.632604		

* implies significant at 1% level and ** significant at 5% level

Table 2 shows the Augmented Dickey-Fuller test for stationarity (unit root) of the variables series. The results revealed that at level, two (2) variables which are export contribution to gross domestic product(EXPGDP) and unemployment rate (UNR) attained stationarity. They were significant at 1% level as depicted by their respective P-value of 0.006 and 0.004, thereby leading to the rejection of the null hypothesis of non stationarity of two variables. The result of the first difference indicated that all variables attained stationarity and were statistically significant at 1% level except GDP that was statistically significant at 5% level.

Table 3. Summary of Phillip-Perron(PP) (Unit Root) Test Results

Variable	Phillip-Perron Statistic value	PP Test Critical value(5%)	Probability	Order of Integration	Remarks
PCI	-3.200847	-2.986225	0.0319*	I(1)	Stationary
EXPGDP	-8.431029	-2.986225	0.0000 *	I(1)	Stationary
FDI	-5.959530	-2.986225	0.0000*	I(1)	Stationary
GDP	-2.614529	-2.986225	0.1034**	I(1)	Stationary
UNR	-2.728707	-2.986225	0.0834**	I(1)	Stationary

* implies significant at 5% level and ** significant at 10% level

Source: Author's computations (2020) using Eviews7

Table3 shows the Phillip-Perron unit root test results. The results pointed out that all variables except EXPGDP are non stationary at levels because their calculated phillip-perron(PP) values are less than their critical values at 5% level.

Table 4 Welfare Equation Estimate Proxied by Per Capita Income

Variable	Coefficient	Std. Error	t –statistic	Prob.
LogEXPGDP	0.3187	0.0693	4.5969	0.0001
LogFDI	0.0284	0.0329	0.8639	0.3969
LogGDP	0.8064	0.0347	23.2019	0.0000
C	0.8648	0.1302	6.6389	0.0000

R-squared	0.984211	Mean dependent var	3.027652
Adjusted R-squared	0.982058	S.D. dependent var	0.349239
S.E. of regression	0.046780	Sum squared resid	0.048144
Long-run variance	0.002176		

Source: Authors' computation

From the estimated regression, it was observed that the coefficient of the explanatory variables: Foreign direct investment(LogFDI) export contribution to gross domestic product (LogEXPGDP) and gross domestic product(GDP) impacted on the welfare proxied by per capita income as implications of free trade area positively. This showed that LogFDI= 0.0284 implying that a unit change FDI on the average while holding other variables constant brings about 2.84 units or 2.84% increase in the welfare of individual households. In the same vein, the LogEXPDP = 0.3187, indicating that a unit change in the export contributions to gross domestic products leads to about 31.87% rise in welfare proxied by per capita income of individual households. Again, it was observed from the estimate that the gross domestic product LogGDP in its logarithm was 0.8064 which denotes that on the average while holding other variables constant, leads to about 0.8064 or 80.64% increase in the welfare of the individual households. This implies positive contributions of free trade activities to promoting wellbeing of the households.

It was observed from the estimates, that the positive effects of the variables: LogEXPGDP and LogGDP were statistically significant except LogFDI given their t-statistics of 4.60 with p-value of 0.001 (1%); 23.20 with p-value of 0.001(1%) respectively. These findings were contrary to that of Balogun and Dauda (2012) who established a negative inverse between trade liberalization and price incentives which theoretically is believed to stimulate domestic production. However, similar to this study finding is the work of Jensen and Sandery (2015) and Sabina and Eldin(2018) that was undertaken among selected African countries which indicates that regional integration and intra-African trade barriers reduction is second-best option for promising wellbeing in the region. Also in line with the findings of the study is that of Abrego, et al. (2019) who documented international trade as a welfare promoting policy.

The combined effect of the explanatory variables on the welfare proxied as per capita income (PCI) measured by the $R^2 = 0.956$ indicates that approximately 96 percent of total variation in the welfare proxied by per capita income (PCI) was explained by the variables in the model. This leaves about 4% variations in PCI unexplained within the model which therefore attributable to extraneous factor outside the model. This indicates that the model is well-fitted. The Durbin Watson statistics (1.7) indicates non presence of serial autocorrelation.

Table 5. poverty equation estimates proxied by unemployment rate

Variable	Coefficient	Std.Error	t-stat.	Prob.
FDI	-0.213947	0.040364	-5.300496	0.0000
EXPGDP	-0.048861	0.012090	-4.041379	0.0005
C	4.804396	0.336055	14.29646	0.0000
@TREND	0.085740	0.014465	5.927529	0.0000

R-squared	0.729263	Mean dependent var	4.093462
Adjusted R-squared	0.692345	S.D. dependent var	0.697171
S.E. of regression	0.386698	Sum squared resid	3.289773
Durbin-Watson stat	1.712764	Long-run variance	0.126686

Source: Authors' computation using Eviews 7.

The poverty proxied by unemployment estimated the relationship between unemployment rate (UNR) and the explanatory variables: export contribution to gross domestic product (EXPGDP) and Foreign Direct Investment (FDI). The estimates indicate that the two variables viz Export contributions to gross domestic product (EXPGDP) and (FDI) demonstrated an inverse relationship with poverty represented by unemployment rate. The study estimates of the coefficient indicates that a unit change in the FDI while holding other variable constant leads to reduction in unemployment rate by -0.0488 or (4.9%). It was documented to be statistically significant at 1% level as demonstrated by the t-statistics (4.04) in absolute term and p-value (0.001). In the same token, a unit change in the export contribution to gross domestic product (EXPGDP) while holding other variable constant brings about -0.2139(21.39%) reductions in the unemployment rate. It was discovered to be statistically significant at 1% level given the t-statistics value of 5.30 with p-value of 0.001. The employment promoting variables documented by this study is in line with the submission of Kim (2011) who asserted that international trade policy promotes employment.

To determine the explanatory power of the model, the co-efficient of determination (R^2) revealed 0.729 which indicates that approximately about 73% of the variation in dependent variable was explained by all the explanatory variables while about 0.27(27%) was unexplained by the model which were attributed to the extraneous variables outside the model. The adjusted R^2 stood at 0.69(69%) which is still above 50% household of significant level.

The Durbin-Watson statistics =1.71 which is approximately 2.0 denotes absence of autocorrelation among the variables. From result, it can be deduced that export contribution and foreign direct investments (FDI) have the potential in reducing the rate of unemployment thereby reducing the poverty and promoting the wellbeing of the masses. To this end, it can be established that if export and foreign direct investment is fully harnessed through free trade activities among nation, the unemployment will be further reduces to acceptable rate.

5. CONCLUSION AND POLICY RECOMMENDATIONS

The study investigated the implications of free trade area on poverty, households' welfare and economic development. Time series data covering 27years (1991 to 2017) were used to estimate welfare which was proxied as income per capita as well as poverty which was proxied as unemployment models in the study. To achieve the objective of the study, a fully modified ordinary least squares regression technique is used to obtain the estimates of the model. It was documented that there exist positive relationships between the foreign direct investments, contribution of export to gross

domestic product which were employed to estimate the free trade area contributed implications on welfare captured by per capita income of individual households. This implies that foreign direct investment promotes welfare in a country whose free trade area policy enable investors from other countries to participate in business or investment activities. Again, the study concluded revealed that the export contributions to gross domestic product (EXPGDP) have a positive significant implication on the welfare of the individual households. This implies that the more the volume of export contributions the more positive welfare effects on the masses. Besides, the results showed that gross domestic product promotes welfare of the individual households. It was also ascertained from the study that foreign direct investment (FDI) and export contributions to gross domestic product (EXPGDP) led to the decline in unemployment rate.

On the basis of the findings, the study recommend that: to further promote households' welfare and reduce poverty, actionable policies such as removal of restriction on the investors' permits, business registration requirements and other necessary policies that may provide enabling environment to make business thrive as well as promotes foreign direct investment(FDI) should be emphasised. Again, policies that promote export, such as reduction in tariff, simplifying regulations, increasing the availability of credit to exporters, creations of duty drawback and improving cooperation among economic actors should be emphasised so as to reap the full benefits of free trade areas like welfare improvement and poverty reduction.

Besides, to promote growth in order to further positively enhance the welfare of the households and reduce poverty, policies that accelerate the country's output such as structural changes and infrastructural development should be stressed. Among the setbacks suffered by the study was the inability to obtain appropriate data and variables to capture the free trade areas and its implications on wellbeing of households as well as forecasting the future implications of free trade areas. Though, to a greater extent, this study fairly well handled this hitch by using suitable variables and data as proxies to attain its objective. On this basis, the study recommends further research on this area of study that could explore more knowledge on most especially forecasting and predicting studies on the implications of free trade areas.

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