Poverty and employment impact of trade liberalization in Nigeria: empirical evidence and policy implications

Emmanuel Dele Balogun and Risikat O. S. Dauda

Department of Economics - University of Lagos, Lagos, Nigeria

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POVERTY AND EMPLOYMENT IMPACT OF TRADE LIBERALIZATION IN NIGERIA: EMPIRICAL EVIDENCE AND POLICY IMPLICATIONS

By

Balogun, E.D., Ph.D & Dauda, Risikat O. S., Ph.D
Department of Economics
University of Lagos
Akoka, Lagos
E-mail: edbalogun@yahoo.com
rissydauda@yahoo.com

Abstract

This paper analyzes quarterly data which spans the period 1985 to 2010 to investigate the interrelationship between trade liberalisation, employment dynamics and the implications for poverty alleviation in Nigeria. An overview of macroeconomic trends and patterns during the period show that although the Nigerian economy experienced growth, it was accompanied by rapid rise in unemployment and poverty. The econometric analysis, estimated by systems equation model, related terms of trade, implicit producer price incentives, openness and macroeconomic policy outcomes on agricultural and industrial sector incomes per capita and total trade. The findings tended to show that the fortunes of these sectors deteriorated contrary to the assertion that a positive relationship exists between liberalization and poverty reduction via improved productivity of labor intensive smallholder farm and firms enterprises. While the apparent growth in total trade seemed to be buoyed by positive export supply shocks, deteriorating terms of trade and biased producer incentives structure penalized domestic manufactures and farming, thereby accentuating poverty. This adverse consequence is attributable to the adoption of import substitution industrialization strategy which encouraged the influx of foreign firms that are appendages of multinationals. In concluding, the paper calls for a shift in policy approach to economic development from the pervasive import substitution trade strategies which tended to displace labor to an export led strategy guided by the doctrine of factor endowments.

1. Introduction

Trade liberalisation is generally believed to be a crucial component of the macroeconomic policy necessary for growth and socio-economic well-being. This is because a free trade situation results in overall global welfare gains as each trading nation will maximize output based on the doctrine of relative comparative advantage and/or factor endowments. For a labour surplus economy, it is expected that trade openness would foster the export of labour intensive products thereby generating gains in labour employment and poverty alleviation. This perhaps will explain why Bouet (2006) noted that the world community that made poverty alleviation as the main goal of MDGs called for current global trade negotiations, conducted by the World Trade Organization (WTO), the Doha Development Agenda. The expectation is that trade liberalization will have positive effect on

development and poverty reduction especially among less developed countries characterized by surplus labor as factor endowments.

However, it has been observed that open trade policy, backed by exchange rate reforms, which led to improvement in exports of many countries, especially the Asian Tigers, have had adverse consequences on employment and poverty in most LDCs. Although it led to reduction in sectoral incentives bias which favoured manufacturing sector visa-vis labour intensive small scale agriculture, the social consequences on accentuating poverty was very pronounced. Many policy analysts argue that this adverse development is not due to trade liberalisations, but traceable to widespread adoption of import substitution strategies which compromised the gains from trade. Yet trade liberalization is known to hold the key to rapid development and it would appear that it holds the key to overcoming the greatest challenge the region faces in the contemporary global economy.

This study, therefore, investigates the interrelationship between poverty, employment dynamics and trade liberalisation in Nigeria. Using time series data for the period 1986-2010 and a mixed-method of investigation comprising both descriptive and econometrics analysis, the study, specifically examines whether the process of trade liberalisation has caused poverty or contributed to its alleviation. Also, it sheds light on the effect of trade liberalisation policy on poverty via employment channels. Policy implications of the study are discussed in the paper. The rest of the paper is divided into four parts. Part 2 reviews the literature while part 3 specifies the methodology. Part 4 presents the analysis of the study while the final part contains the summary, conclusions and policy implications.

2. Macroeconomic Background

Until the current decade, economic growth posed significant challenges to the Nigerian economy, especially from the 1980s to the year 2000. The Structural Adjustment Programme (SAP) was introduced in 1986, against the backdrop of the negative economic growth rates of the first half of the 1980s. Major objectives of SAP include the following: the restructuring and diversification of the productive base of the economy in order to lessen dependence on the oil sector and on import; the achievement of fiscal and balance of payment visibility; laying the basis for a sustainable non-inflationary or minimal inflationary growth; and reducing the dominance of unproductive investments in the public sector, improving the sector's efficiency and intensifying the growth potential of the private sector. Trade liberalization policy was a major component of the IMF-World Bank structural adjustment programme (SAP). Liberalization of restrictive trade policy regime culminated in the

deregulation of foreign exchange market and it was expected this would create jobs, reduce poverty and enhance economic growth performance. It is noteworthy that the performance of the economy, in the light of the SAP policy reforms, was generally sluggish. However, in the period between 1999 and 2008, the overall performance of the economy, as measured by the growth of real GDP, was impressively high (NPC, 2009). Table 1 presents the GDP, oil and non-oil growth rates at 1990 constant basic prices while Table 2 examines sectoral contributions to the GDP for the period between 1999 and 2008. The real GDP grew at an annual average rate of 5.6 percent during the ten-year period and was highest in three decades. The fact that the economy grew almost two times as fast as the estimated 3.0 percent growth rate of the population ensures a real per capita output growth of 2.6 percent. Similarly, the oil GDP and non-oil GDP grew at an annual average rate of 1.7 percent and 7.6 percent respectively.

Table 1: GDP, oil and non-oil growth rates at 1990 constant basic prices

Activity Sector	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Total GDP Growth Rate	2.8	3.8	4.72	4.63	9.57	6.58	6.51	6.03	6.45	6.41
Oil GDP Growth Rate	-7.5	11.2	5.23	-5.71	23.50	3.30	0.50	-4.51	-4.54	-4.76
Non-oil GDP Growth Rate	4.2	3.0	4.54	8.27	5.17	7.76	8.59	9.41	9.52	9.13

Source: CBN (Various Years) Annual Report and Statement of Account, CBN, Abuja.

Table 2: Sectoral Contributions to GDP, 1999-2008

	% of GDP	Growth (%)	Contribution to GDP Growth (%)
Large Sectors			
Crops	36.9	7.70	40.88
Oil and gas	23.2	2.23	-4.49
Wholesale and retail trade	14.2	15.96	28.78
Medium Sectors			
Financial Institutions	3.93	2.16	1.79
Manufacturing	3.88	9.05	5.20
Electricity	3.28	24.46	3.91
Livestock	2.67	6.19	2.62
Road transport	2.26	13.9	3.35
Building and Construction	1.66	8.70	2.38
Telecommunications	1.62	50.90	6.62
Real Estate	1.47	9.67	2.20
Fishing	1.38	5.51	1.92

Sources: (i) National Planning Commission (2009) *Nigeria Vision 20: 2020; Economic Transformation Blueprint*, Abuja.

The non-oil sector, which grew at an annual average rate of 9.48 percent, was solely responsible for the observed improved growth performance of the 2000s, while the oil sector constituted both a drag on growth and a source of instability in the GDP growth pattern. The growth in the non-oil sector was largely the result of growth in the agriculture sector (crop production) and services sector (wholesale and retail trade and telecommunications). The oil sector fluctuated wildly, stagnating, and contracting over the decade, while the non-oil sector grew steadily as the agricultural and trading sectors responded to the favourable global

Table 3: Growth of Exports, Imports and Openness in Nigeria, 1980-2010 (%)

Year	Imports	Exports	Openness
1980	21.7	30.9	48.9
1985	-1.6	29.0	27.2
1990	48.1	89.6	49.9
1999	3.0	58.1	44.8
2000	14.2	63.6	62.0
2001	37.9	-3.0	46.7
2002	11.4	-6.6	38.4
2003	37.5	77.0	45.3
2004	-4.5	49.1	45.2
2005	41.0	57.4	54.1
2006	11.0	1.1	50.5
2007	25.8	13.4	50.3
2008	32.7	22.3	61.9
2009	-1.7	-17.8	46.1

Source: Computed from CBN (2010) Annual Report and Statement of Account, CBN, Abuja

cyclical upturn that propped up global demand for and prices of most commodities.

An analysis of the sectoral contribution to GDP for the period 1999-2008 shows that, of the 33 production sectors that grew on average, 3 sectors accounted for more than 10%t of GDP, while 9 sectors accounted for more than 1% but less than 10% of GDP (NPC, 2009:24). Out of the three large sectors, it was discovered that the oil sector impacted negatively on GDP growth despite periods of high average daily production and high oil prices. The remaining two large sectors contributed as much as 70% of the GDP growth during the period. Crop production contributed 41% of GDP growth while trading contributed 29%. In the medium sized sectors, telecommunications and manufacturing contributed 6.62% and 5.20% respectively. The remaining medium sized sectors contributed between 1% and 4% to GDP growth (see, Table 2). Despite the positive trend of the non-oil sector, it has not effectively created productive employment necessary to significantly raise

the level of per capita income and ensure a sustained poverty reduction in a labour intensive economy such as, Nigeria.

A cursory look at Nigeria's trade liberalization efforts clearly provides evidence that the economy is not in isolation from the rest of the world. The growth of exports and imports as well as the index of openness are shown in Table 3. The index of openness measured as the share of total trade in GDP, which was 27.1 percent in 1985, rose to 62 percent in 2000. It was 61.9 percent in 2008 but declined to 41.9 percent in 2009. This is not unconnected to the adverse effect of global financial crisis. One can infer that extensive liberalization and deregulation of the economy have immensely contributed to the integration of Nigeria into the world economy. It should be noticed that the full benefits of trade liberalization could not be realized because of the weak competitive base of the primary export sector due to heavy reliance on cash crop production.

Table 4: Relative Poverty Headcount, 1980-2010

Year	Poverty Incidence (%)	Estimated Population (Million)	Population in Poverty
1980	27.2	65	17.1
1985	46.3	75	34.7
1992	42.7	91.5	39.2
1996	65.6	102.3	67.1
2004	54.4	126.3	65
2010	69.0	163	112.47

National Bureau of Statistics (2010), Nigeria: Poverty Profile Report, Abuja

Drawing from literature, Eboreime and Iyoko (2008) identified internal and external constraining the competiveness of the Nigerian economy. These include excessive devaluation of the naira, inadequacy of economic infrastructure, high inflation and interest rates, foreign borrowing, political instability and lack of genuine social engineering among others.

With respect to poverty reduction and employment generation, the performance of the Nigerian economy leaves much to be desired. Table 4, which present the poverty profile in Nigeria, reveal that poverty incidence increased from 27.2 percent in 1980 to 65.6 percent in 1996. Although, it declined to 54.4 percent in 2004, it rose sharply to 69 percent (table 4). On

Table 5: Incidence of Poverty by Zones using different Poverty Measure (%)				
Zone	**Food Poor**	**Absolute Poor**	**Relative Poor**	**Dollar per Day**
North Central	38.6	59.5	67.5	59.7
North East	51.5	69.0	76.3	69.1
North West	51.8	70.0	77.7	70.4
South East	41.0	58.7	67.0	59.2
South South	35.5	55.9	63.8	56.1
South West	25.4	49.8	59.1	50.1
National Bureau of Statistics (2010), Nigeria: Poverty Profile Report, Abuja				

a regional basis, no matter the measure of poverty one adopts, North West appeared to be the worst hit by poverty incidence (table 5).

With respect to employment situation, the result of the Nigeria's National Manpower Stock and Employment Generation survey showed that the national unemployment rate is 21.1 percent of the labour force in 2010. This, however, should be interpreted with caution because of the unrealistic nature of employment data in a developing country, Nigeria.

Considering the above scenarios, it appears the high incidence of poverty raises a question as to whether trade liberalization has the potential to facilitate the production of competitive export of labour intensive products which can generate gains in labour employment and poverty alleviation.

3. Literature Review

The recent empirical literature identifies several key linkages through which trade liberalization affects development: the price and availability of goods, factor prices, government transfers, incentives for investment and innovation, terms of trade, and short-run risk (Buoet 2006; Winter, McCulloch, and McKay, 2004).

Bouet (2006) notes that the traditional argument in favor of a positive relationship between liberalization and poverty reduction focuses on the first two linkages: price and availability of goods and factor prices. According to him, this is because "a large proportion of poor people work in the agricultural sector, where trade distortions are particularly high. Liberalization could lead to higher world agricultural prices and raise activity and remuneration in this sector in developing countries. The same beneficial outcome could occur in the textile and apparel sectors, where protection remains high and developing countries have a comparative advantage."

In this particular study titled "How much will trade liberalization help the poor?: Comparing Global Trade Models", Bouet (2006) concludes that these literatures also believe that openness can also have negative effects. According to him -- "first, government transfers can shrink as liberalization cuts the government's receipts of trade-related taxes. Second, terms of trade can deteriorate as liberalization affects world prices. Third, liberalization can impose adjustment costs and raise short-run risk owing to competition from imports and reallocation of productive factors. As a consequence, it is uncertain how much trade liberalization would reduce poverty, and many studies have attempted to assess the size of these benefits. The main empirical tool for this work is the multicountry computable general equilibrium (CGE) model—a sophisticated and complex tool of analysis that often appears as a "black box" from which results are difficult to understand.

Divergent Assessments

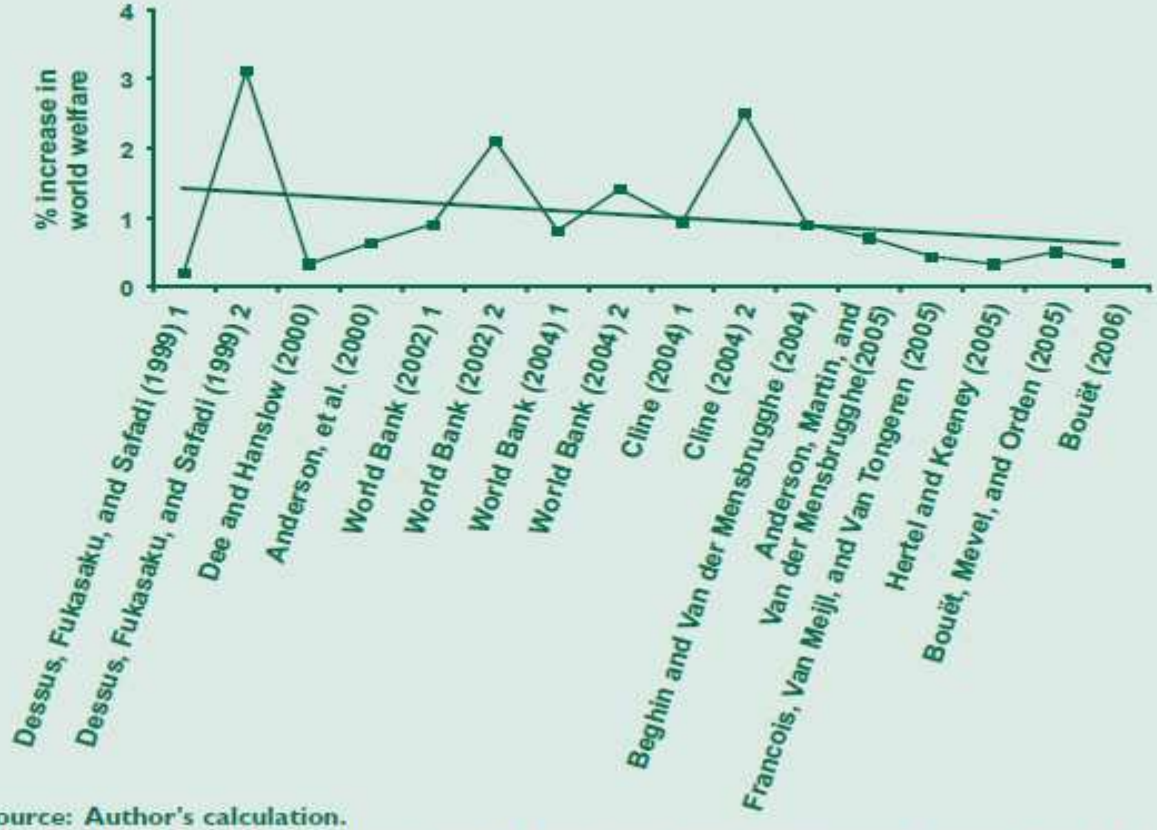
Without being exhaustive, Bouet (2006) compiled a survey of 16 assessments, using CGE models, of the global consequences of full trade liberalization from 1999 to 2005. He notes that these studies clearly highlight a major divergence. He concludes that from "full trade liberalization, the implied increase in world welfare ranges from 0.3 percent (Hertel and Keeney, 2005) to 3.1 percent (Dessus, Fukasaku, and Safadi, 1999)". He noted that these results "differ by a factor of more than 10!" and that "estimates of the number of people lifted out of poverty also range widely, from 72 million (Anderson, Martin, and Van der Mensbrugghe, 2005) to 440 million (Cline, 2004), differing by a factor of 6."

Bouet 2006) survey also show that a "simulation of full trade liberalization has also been run at IFPRI using the MIRAGE model (a full description of this model is available at www.cepii.fr)" which led to the conclusion "that full trade liberalization would increase world real income by 0.33 percent after 10 years of implementation". He therefore inferred that this "trade reform would be development- friendly: it would lead to a higher rate of growth in middle-income countries (0.4 percent) and in least-developed countries (0.8 percent) than in rich countries (0.3 percent). It would also contribute to poverty alleviation because gains would go to unskilled labor in many developing regions, especially in Latin America and part of Sub-Saharan Africa. Finally, full trade liberalization would reduce world income inequality; the Gini coefficient of world income distribution (taking into account population distribution) would be slightly reduced. Nevertheless, some developing countries might be hurt by this world reform. Trade liberalization implies allocation efficiency gains, which are positive in all cases. But liberalization may reduce some countries' terms of trade

because soaring world prices of agricultural commodities would hurt net food importers (such as Bangladesh, China, Mexico, and countries in the Middle East and North Africa) or because preferential access to certain markets could be eroded (such as in Bangladesh, Mexico, Tunisia, and countries in Sub-Saharan Africa outside the Southern African Customs Union)."

Figure 1 arranges estimations of world benefits from full trade liberalization, as reviewed by Bouet (2006) in his survey, in chronological order by date of study. It shows that

Figure 1—Trade pessimism? Assessments of the impact of full trade liberalization on world welfare



Source: Author's calculation.
Note: Where a study made more than one assessment, each assessment appears separately in the figure, and a "1" or "2" follows the study author and date.

studies are finding the expected world welfare gain becoming smaller and smaller (or more precisely, the trend, calculated according to a linear regression, exhibits a decreasing slope). The average estimate of the increase in world welfare falls from 1.7 percent in 1999 to 1.5 percent in 2002, 1.3 percent in 2004, and 0.5 percent in 2005.

A number of studies have investigated the interrelationship between poverty, employment dynamics and trade liberalisation in both the developed and developing countries (Rattso and Torvik, 1998; Milner and Wright, 1998; Winters, McCulloch and McKay, 2002; Lee, 2005). The findings of the studies are often inconclusive. Based on a review of

empirical literature and an analytical framework which addresses four key areas: economic growth and stability; households and markets; wages and employment and government revenue, Winters, McCulloch and McKay (2002) examined the relationship between trade liberalization and poverty. They found that although there is a tendency for static and micro-economic effects of trade liberalisation to alleviate poverty in the long run, however, there is no guarantee that the gains of trade openness will be beneficial for the poor. This is because the adjustments under trade reform may place the poor at a disadvantaged position to protect themselves against adverse effects and take advantage of favourable opportunities.

A similar analysis by Lee (2005) which reviews both multi-country and country studies on the impact of trade liberalization on growth and employment in developing countries shows conflicting results. Findings suggested that for trade liberalization to have a desirable effect on employment, country-specific and contingent factors such as macroeconomic, structural and social policies are of utmost importance.

In Zimbabwe, Rattso and Torvik (1998) observed that drastic trade liberalization efforts of the early 1990s culminated in a contraction in output, employment and real wage rate which was accompanied by a sharp increase in imports and a rising trade deficit. This is in sharp with the findings of Milner and Wright (1998) carried out in Mauritius which showed that the reduction in protection for local firms as a result of trade liberalization enhanced employment opportunities in export industries.

4. Methodology

Given the trend in the literature of using CGE models, an attempt is made here to analyze the subject for Nigeria using a system equation to specify a short structural model of the relationship between sectoral productivity incomes, price incentives and trade openness. The implicit forms of the structural equation estimated are:

$$\frac{Y_{ind}}{LF_{ind}} = f(\frac{Y_{ind}}{LF_{ind}}(-1)(-2), \frac{Y_{agr}}{LF_{agr}}(-1)(-2), XT + MT(-1)(-2), C, \frac{P_x}{P_m}, Y_d * Y_f, \frac{P_a}{P_i}, ExR_t,$$

$$M_2, I_p, \frac{XT+MT}{Y}, FR, \frac{P_{cpif}}{P_{cpid}}) \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots (Eq.1)$$

$$\frac{Y_{agr}}{LF_{agr}} = f(\frac{Y_{ind}}{LF_{ind}}(-1)(-2), \frac{Y_{agr}}{LF_{agr}}(-1)(-2), XT + MT(-1)(-2), C, \frac{P_x}{P_m}, Y_d * Y_f, \frac{P_a}{P_i}, ExR_t,$$

$$M_2, I_p, \frac{XT+MT}{Y}, FR, \frac{P_{cpif}}{P_{cpid}}) \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots (Eq.2)$$

$$XT + MT = f(\frac{Y_{ind}}{LF_{ind}}(-1)(-2), \frac{Y_{agr}}{LF_{agr}}(-1)(-2), XT + MT(-1)(-2), C, \frac{P_x}{P_m}, Y_d * Y_f, \frac{P_a}{P_i}, ExR_t, M_2, I_p, \frac{XT+MT}{Y}, FR, \frac{P_{cpif}}{P_{cpid}}) \ldots\ldots \ldots\ldots\ldots\ldots\ldots\ldots\ldots (Eq.3)$$

Whereby the 3 Depend variables are:

- $\frac{Y_{ind}}{LF_{ind}}$ = Per capita income of industrial sector derived as a ratio of manufacturing GDP (Y_{ind}) to total labour force (LF_{ind}) employed by the industrial sector
- $\frac{Y_{agr}}{LF_{agr}}$ = Per capita income of agricultural sector derived as a ratio of agricultural sector GDP (Y_{agr}) to total labour force employed by the agricultural sector (LF_{agr})
- $XT + MT$ = Total Trade derived as Total exports (XT) plus total imports (MT)

And the exogenous variables are:

- C = Constant
- $\frac{P_x}{P_m}$ = Terms of trade defined as the ratio of export price index (P_x) to import price index (P_m)
- Y_d*Y_f = Product of Domestic GDP (Y_d) and Foreign GDP (Y_f) of a major trading partner – USA – a measure of the gravity of trade between a large and small country
- $\frac{P_a}{P_i}$ = Measure of bias in sectoral price incentives derived as the ratio of agricultural GDP price deflator (P_a) to industrial GDP price deflator (P_i)
- ExR_t = exchange rate N/$;
- M_2 = Broad Money supply to show monetary policy stance;
- I_p = interest rate defined as the monetary policy rate to show policy stance;
- $\frac{XT+MT}{Y}$ = Measure of trade openness defined as a ratio of total trade ($XT+MT$) to GDP at current market prices (Y)
- FR = Foreign reserve depicting international financial credibility to participate in international trade;
- P_{cpid} = Domestic aggregate consumer price index for Nigeria
- P_{cpif} = Foreign aggregate consumer price index for Nigeria

The data for this study was derived mainly from CBN statistical Bulletin for 2010, World bank Data base and IMF IFS statistics. The quarterly data spans through the period 1985 to 2010.

The system equation was estimated with Eviews6.1 to obtain the structural parameters of the model. The starting point was the estimation of the structural vector auto regression equation which helps to establish the stability of the basic data that was used in the estimation of the model. A cointegration test shows that the dependent variables were stable at the first difference order for the 3 dependent variables. The estimation procedure adopted was the seemingly unrelated regression model. A total of 101 observations were included for each equation representing a total system (balanced) observations of 303 and estimated via linear estimation after one-step weighting matrix.

5. Empirical Results

Table 6 presents the empirical results of the analysis of data. The overall goodness of fit (adjusted R^2) of the structural Eq. 2 and Eq. 3 were high at 70% and 80% respectively suggesting that the model and parameter estimates significantly explained the simultaneous relationship between the dependent variables and the explanatory variables. The poor overall goodness of fit of Eq. 1 is suggestive of a poor relationship between industrial productivity per capita and key trade liberalization variables. This is likely to be expected given the fact that despite the attempt to liberalize trade, very high tariff and non-tariff barriers were in place during the period under consideration, in the name of protecting infant industries that were appendages of multinational corporations. It is however remarkable to note that the coefficients of the explanatory variables in the 3 structural equations are significant justifying their inclusion in the systems equation estimated. Two variables that its coefficient was insignificant in all the 3 structural equations of the system and had to be eliminated from the structural equation estimation is interest rate (Ip) and foreign reserve holding (FR). This suggest that cost of funds and international financial credibility has never been a constraining factor on trade and relative per capita incomes of both agriculture and industrial sectors.

An assessment of the sign and magnitude of the coefficients of the vector autoregressive components of the 3 equations (i.e. lagged values of the dependent variables denoted as 1 to 6) show that the 3 dependent variables have an inverse relationship with their past values. This tends to suggest that these variables exhibited declining trends with trade liberalization. This can be understood for equation 1 but it is worrisome for equations 2 and 3.

Table 6: Regression Results									
Equation		1			2			3	
Dependent Variables		(LOG(YIND/LFIDUS			D(LOG(YAG/LFAGR))			D(LOG(XT+MT))	
Independent Variables		Coef	Error	tstat	Coef	Error	tstat	Coef	Error	tstat
1	D(LOG(YIND(-1)/LFIDUS(-1)))				-0.02	0.01	-1.81	0.29	0.01	20.30
2	D(LOG(YIND(-2)/LFIDUS(-2)))	-0.36	0.08	-4.51	-0.37	0.08	-4.85	-0.11	0.06	-1.80
3	D(LOG(YAG(-1)/LFAGR(-1)))	-0.72	0.08	-9.24	0.15	0.07	2.02	-0.20	0.06	-3.10
4	D(LOG(YAG(-2)/LFAGR(-2)))							-0.23	0.04	-5.38
5	D(LOG(XT(-1)+MT(-1)))	0.17	0.06	2.89	-0.71	0.06	-11.94	-0.27	0.05	-5.53
6	D(LOG(XT(-2)+MT(-2)))	0.09	0.05	2.04						
7	C	-0.09	0.23	-0.39	-0.65	0.30	-2.16	-1.40	0.55	-2.54
8	LOG(PX/PM)	-0.08	0.05	-1.63						
9	LOG(YD*YF)							0.23	0.04	5.51
10	LOG(PA/PI)							-0.24	0.03	-7.00
11	LOG(EXRT)							0.22	0.04	5.30
12	LOG(M2)							0.10	0.03	3.24
13	LOG(IP)									
14	LOG((XT+MT)/Y)	-0.01	0.04	-0.34	-0.12	0.05	-2.23	0.72	0.05	15.04
15	LOG(FR)									
16	LOG($P_{cpif/Pcpid}$)	0.01	0.04	0.38	0.12	0.06	2.15	-0.44	0.06	-7.77
Group Statistics										
R-squared			0.48			0.70			0.80	
Adjusted R-squared			0.45			0.68			0.77	
S.E. of regression			0.10			0.09			0.08	
Prob(F-statistic)			2.57			2.77			1.92	
Mean dependent var				0.00			0.01			0.02
S.D. dependent var				0.13			0.16			0.16
Sum squared resid				0.86			0.82			0.52

Source: Authors' calculations using Eviews. The system model comprising of 3 independent was estimated by seemingly unrelated regression:

Sample: 1985Q4 2010Q4
Included observations: 101
Total system (balanced) observations 303
Linear estimation after one-step weighting matrix

With regard to Eq. 1, trade liberalization which promotes import substitution industrialization strategy cannot but lead to decline in relative productivity of industrial enterprises that produces for a domestic market that competes with import. However, this adverse trend is ironical for Eq. 2 and contradicts the factor endowment theory that a labour abundant country that specialize in producing labour intensive products for export stands to gain from trade liberalization. Indeed, smallholder agriculture dominates and account for a significant proportion of non-oil exports and domestic food supply. Apart from periodic shocks in international primary commodity market whereby eras of booms often leads to

declines in prices (with adverse consequence for farm incomes), supply side constraints such as low productivity, dependence on rain-fed agriculture, aging population, use of crude implements and methods of production have contributed in no small measure to the declining trends in agricultural incomes per capita. With regard to Eq. 3, the inverse relationship between total trade and its past trends is consistent with the literature for a small country with a large non-tradable sector but has had to augments domestic supply with huge imports.

Trade Liberalization and Price Incentives

Contrary to the theoretical expectation that trade liberalisation would lead to improved price incentives for stimulating domestic production of manufacture and food production as replacement for huge imports, emergent incentives tended to hurt these sectors. In particular, the emergent terms of trade (Px/Pm) (depicted as independent variable 8 in Table 6) had no influence at all on total trade and per capita incomes of agriculture but tended to have adverse consequence on per capita earnings of the manufacturing sector. This progressive deterioration seemed to hurt industrial productivity the most and it is of no consequence to agricultural productivity and total trade. Again, this is to be expected as many LDCs specialize and produce primary commodities whose prices experience shocks, booms and recessions in the world market driven by market fundamentals and trading in commodity exchanges. As price takers, they are compelled to pay dictated prices for manufactures since the products are franchised and not traded under free market conditions.

The coefficient of the relative implicit producer price incentives in favour of industries viz-a-viz the bias against agriculture (Pa/Pi), has adverse consequences on total trade for a number of reasons. The first is the adoption of inappropriate price incentives for both agriculture and industrial enterprises which dwelt extensively on input subsidy that accrue to unintended beneficiaries. Evidences show that suppliers and importers of the subsidized farm inputs such as fertilizers, tractors and industrial inputs such as refined petroleum products were the major beneficiaries instead of farmers and small to medium industries. Secondly, the policy focus appeared misplaced as the subsidy was meant to induce the adoption of labour displacing capital intensive methods of production in a country that has labour in abundance. Finally, the structure of price incentives did not accommodate or make provision for supporting research and development which holds the key to shifting the production possibility frontiers given the nations factor endowments.

Foreign exchange market Liberalization and macroeconomic outcomes

The starting point for trade liberalization is foreign exchange market liberalization especially current account. This has implications for money creation through increased net domestic credit to finance trade and monetization of reserves through foreign exchange market auctions periodically. This causes a shift in aggregate money supply consistent with exchange rate regime shifts. The resultant monetary expansion has been known to trigger inflationary spiral. It is therefore not surprising that the primary effect of the money supply variable (M2) and exchange rate (Exrt) is on total trade. Both variables exert a positive effect on total trade but had no effect on per capita productivity of agriculture and industrial sector. The general inference is that the emergence of liberalized foreign exchange market tended to divert credit from real sector activities towards support for foreign trade transactions. The crowding out effect became very pronounced with the emergent foreign exchange market segregation which encouraged speculative transactions to the detriment of the real sector

As a consequence, there seem to be a widening divergence between international and domestic inflation thereby eroding the purchasing power of the national currency *viz a viz* foreign currency. In particular, the implicit purchasing power parity variable captured by the ratio of foreign consumer prices (Pcpif) to domestic consumer prices (Pcpid) exhibited a significant relation in the 3 structural equations. However, while it negatively affects total trade, it has positive effect in relation to per capita productivity of industry and agriculture respectively. The adverse effect on total trade is to be expected for a number of reasons. First, the foreign exchange content of Nigeria's domestic activity is very high. A number of policy analyst put this at about 70% to 80% of every N1 aggregate consumption spending. As a consequence, deteriorating relative purchasing power would induce reduction in real imports demand but at higher prices and subject to budget constraints. This inference is also consistent with the positive relation of this variable to industrial and agricultural per capita incomes. Rising imported inflation relative to domestic inflation should cause increased demand for home made products as substitute for imports.

Openness and Trade Liberalization

The trend in Nigeria's capacity to participate in international trade is captured in the estimated model by two independent variables: variable (14) - the share of total trade (XT+MT) in gross domestic output and variable (9) the log transformation of the product of

foreign country trading partner GDP (Yf) and the domestic GDP (Yd) to measure the gravity of endogenous similarities in economic profile.

The signs and magnitudes of the coefficients of the two variables suggest that though the degree of trade openness can have positive effects on total trade, it had adverse consequences for the relative productivity of the domestic industry and agriculture. In particular, openness encouraged influx of cheap imports that are perfect substitutes for many consumer products especially food and agro-allied products Openness induced by trade liberalization over time weakened the demand for domestically produced food and manufactures in the face of dangerous appetite and preferences of Nigerians for consuming foreign instead of homemade goods.

Contrary to the theoretical expectation of an inverse relationship between the trade gravity variable (Log Yf*Yd) to total trade (in the case of trade between a large country (USA) and a small country (Nigeria)), the coefficient estimate of this variable is positive and significant. This can be explained by the fact that eras of economic booms in the USA is associated with increased demand for energy to power the economy. This therefore leads to increased derived demand for Nigeria's major export commodity (crude petroleum) as a major source of energy supply.

Concluding Remarks and Policy Implications

The findings so far tended to show that contrary to the assertion that a positive relationship exists between liberalization and poverty reduction via improved productivity of labor intensive smallholder agriculture and SMEs, the fortunes of these sectors deteriorated. It also shows that the apparent growth in total trade seemed to be buoyed by positive export supply shocks. The structure of price incentives penalized domestic manufactures and farming with the adoption of import substitution industrialization strategy which encouraged the influx of foreign firms that are appendages of multinationals. The high foreign exchange content of these enterprises that utilizes capital intensive resources that Nigeria lacks is an evidence of rising threat to economic independence and food security.

These findings calls for a shift in policy approach to economic development. In particular, economic development approach should be guided by the doctrine of factor endowments. Nigeria has no business promoting and adopting capital intensive import substation industrialization strategy. We need to refocus policies towards promoting employment based on factor endowments especially abundant labour and crude oil deposits.

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