

Globalisation and Employment in Nigeria's Manufacturing Sector: Further Evidence

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Abstract

The debate about the impact of globalisation on employment in manufacturing sector has been ongoing for more than three decades. This paper examined the link between globalisation and employment in Nigeria's manufacturing sector between 1980 and 2013. The theoretical foundation of the work is Heckscher-Ohlin-Samuelson (HOS), which discusses the effects of increased trade on the structure of industry and outputs of a country. HOS model was adapted with slight modification in conducting the investigation with Canonical Cointegration Regression (CRR) as estimation technique. The estimated model showed that manufacturing output had positive impact on employment in the sector. The results indicated that the average capacity utilisation and net export were negatively related to globalisation, implying that trade openness in Nigeria resulted in loss of jobs in the manufacturing sector. The study further revealed that custom and excise duties were reliable predictors of employment generation in Nigeria's manufacturing sector. It was suggested that the government should adopt policies that will ameliorate the adverse effects of her openness to other countries and help her compete favourably in the global market.

Keywords: Globalisation, Employment, Manufacturing, Capacity utilisation, Liberalisation.

JEL: D24; E24

1 Introduction

Globalisation is viewed as the integration of national economies through trade and capital flows among nations, made possible by trade liberalisation, the removal of capital control and advancement of technology (Awolabi, 1998; Ojo and Obaseki, 1998; Ajayi, 2003). Globalisation involves the broadening and strengthening of relations between the economies of the developed and developing countries through trade, finance, investment, technology and migration. Recent developments in trade openness is grounded on the notion of interdependence between the internal and external sectors of an economy. Although, globalisation can benefit developed countries, its cost to developing countries outweighs its potential benefits.

It has resulted in widening of inequality in many poor countries (Albaladejo, 2003).

For some intellectuals, globalisation means nothing more than a re-colonisation process of the third world economies. From this perspective, globalisation has been perceived as a new phase of capitalist expansion, exploitation, accumulation of wealth, inequality and polarisation of world politics (Aina, 1996). To Tverberg (2013), globalisation ties developing countries to the aprons of developed ones, so that if one rich country collapses, the collapse is likely to ripple through the systems of poor nations. He showed that there were significant parallels between financial dislocations in the United States and the types of changes which happened in other societies, as an aftermath of the 2007-2008 global financial crises. His analysis was based on the model of a collapsed economy as illustrated in Turchin and Nefedov (2009). Tverberg (2013) concluded that the failure in one country had the potential to pull many other countries down. Globalisation has become more intensified since the fall of the Berlin Wall, making the global economy more integrated and neo-liberal. In addition, the economic bases of the industrially and technologically less developed states have become decentralised. Consequently, economic globalisation has accelerated as a result of various factors, including information technologies (internet access, mobile phones, spread of commerce, travel and innovations), that have swept across the world (Muhammad, 2011).

Nigeria's manufacturing sector is still quite small and the economy remains heavily reliant on imported finished goods. Compared with developing countries like South Africa, Ghana, Indonesia and Malaysia, the performance of Nigeria's manufacturing sector since 1980 has been less than impressive, and it has continued on a downward trend. This decline is due to a host of reasons such as policy instability, a poor macro-economic environment, bureaucratic bottlenecks, a poor legal environment which cannot guarantee property rights and safety, lack of corporate governance, corruption, and low commitment of governments to industrial development (Albaladejo, 2003). The sector faces several challenges, one of the fundamental problems is erratic supply of energy. High cost of resources and inadequate infrastructure also affect the sector quite adversely. Another major challenge in the manufacturing sector is lack of capacity utilisation, a problem which has become even more aggravated with the emergence of globalisation (Akpan, Inimfon, Daniel and Udoka, 2013). Escalation in foreign exchange rate and other attendant effects of SAP resulted in high cost of raw materials and consequently cost of production in the country (Aluko, Akinola and Fatokun, 2004).

Nigeria remains an active player in the globalisation process at regional, sub-regional and multilateral levels. She is a co-founder of Economic Community of West African States (ECOWAS), New Partnership for African Development (NEPAD) as well as one of the

signatories to World Trade Organisation (WTO). It can therefore be said that she is deeply necked into globalisation initiative. However, the cost of globalisation to her greatly outweighs its benefits, especially in her manufacturing sector. The sector has had to face both domestic recession and world market exposure simultaneously. The brunt of global market exposure on the sector has been so much that so many of its firms have gone under while those remaining in business are down-sizing and operating below their installed capacities due to the fact that they are unable to compete favourably with transnational corporations and globally (Busari, 2004).

1 Brief Overview of Globalisation and Employment in Nigeria's Manufacturing Sector

There are different dimensions to the globalisation debate especially as it affects employment generation. Paterson et.al (2006) opined that technological advancement induced by globalisation had led to a shift of production base or unskilled labour in developing countries, leading to rise in unemployment rate. Globalisation does not only negatively affect demand for unskilled labour in Nigeria, it worsens unemployment situation as she does not have the capacity to take advantage of global market access. The possibility that capital flows to the country in the wake of trade liberalisation would create growth in employment in the manufacturing sector has met with a lot of disappointments, aggregate employment in the sector has been substantially declining. Relative low wage and employment elasticity in Nigeria had been associated with globalisation, consequently, it has been adjudged to have adverse implications on workers' welfare (Orbeta, 2002). Growth of manufactured imports in the country affects manufacturing employment since an average citizen prefers imported goods to local ones as some of our products lack international standards. In addition, the activities of transnational corporations in the country negatively affect the level of employment in the sector.

The average manufacturing capacity utilisation rate (AMCUR) in the Nigeria's manufacturing sector was 76 per cent in 1975. Following the worldwide recession of 1981 and 1982, the AMCUR fell sharply to 73.3 per cent and 63.6 per cent in both years respectively. However, from 1983-1985, the trend worsened as AMCUR nose-dived to 49.7, 43.0 and 38.3 per cent respectively. This was the beginning of what can be called 'destabilisation' in the manufacturing sector performance. AMCUR ranged between 40 and 42 per cent between 1987 and 1991. This trend appeared somewhat stable during this period but nose-dived to 33.5 per cent between 1992 and 1997. This decline in manufacturing activities continued until 2001 when the sector recorded a 42.7 per cent AMCUR. The period between 2002 and 2008 recorded negligible growth in AMCUR with capacity utilisation of 54.6 per cent on the average. The

overall performance of the manufacturing sector has been below expectation as a supposed engine of growth of the economy. The drastic reduction in imports of raw materials following the introduction of austerity measures in 1982 and general policy reversals in the sector had adverse effects on the manufacturing sector. Moreover, the sharp depreciation of naira adversely affected most manufacturing firms because of the increasing cost of importation of spare parts/machinery and infrastructural deficits, weak demand resulting from declining domestic purchasing power, high interest rates, and gross under-utilisation of capacity (Ajakaiye et.al, 2016). The above led to increased importation of consumer goods without a significant increase in manufactured export, making local firms shattered as most consumers prefer cheap and better products to an expensive locally produced goods due to high cost of production and high technological deficiencies in the sector; consequently, many firms left the sector rendering many Nigerians unemployed.

2 Review of Literature

The concept of globalisation has diverse usage, but in the context of this study, the focus is economic globalisation. In its simplest sense, it refers to the widening, deepening, and speeding up of global interconnectedness (Held and McGrew, 2003). As the phenomenon gained momentum in the late 20th century, it brought about a corresponding increase in trade and capital flows as well as labour mobility amongst and between countries. The significance of these economic interactions among countries has long been acknowledged in the literature (Albaladejo, 2003; Rama, 1996). According to Rama (1996), 'globalisation' is the growth, or more precisely the accelerated growth, of economic activity across national and regional political boundaries. It finds expression in the increased movement of tangible and intangible goods and services, including ownership rights, via trade and investment, and often of people, via migration. It can be and often is facilitated by lowering of government impediments to that movement, and/or by technological progress, notably in transportation and communications. The actions of individual economic actors, firms, banks and people; drive it usually in the pursuit of profit, often spurred by the pressures of competition.

According to Obayelu, (2007), employment rate in Nigeria has generally declined due to globalisation. He analysed the effects of globalisation on employment and employees' wages by looking at what happened before, during and after emergence of globalisation in Nigeria between 1970 and 1997. Using descriptive statistic, the results showed that globalisation of the Nigeria economy through various economic reforms, deregulation and privatisation led to downsizing of employment in civil service thereby compounding widespread job queuing in the economy. He observed that the collapse of some of the private sector firms also led to

retrenchment of workers following stiff competition from import after liberalisation thereby increasing both rural and urban unemployment in the nation. His investigation revealed an increase in income inequality in the country. He opined that there was the need for training and re-training of employees in order to assist them in keeping their jobs

In Aluko, Akinola and Fatokun (2004), a survey was carried out on three textile firms in different locations in Nigeria. Data was collected by means of pre- tested questionnaire, its analysis showed that capacity utilisation of the manufacturing sector fell below 40% of installed capacities, indicating that globalisation had adverse effects on capacity utilisation in the sector. They opined that the problems associated with globalisation and liberalisation of trade hindered sustainable development in Nigeria. In the same vein, Muhammad (2011), submitted that globalisation had negative effects on employment level in the Nigerian textile firms. He utilised information obtained from secondary and primary sources on the performance of the firms in Nigeria. His observation was attested to by the collapse of most indigenous textile firms in the country due to inability to compete favourably with their foreign counterparts.

Ogunrinola and Osabuohien (2010) pointed out that there existed a positive relationship between global competitiveness (a proxy of globalisation) and employment in the Nigerian manufacturing sector between 1990 and 2006. The study used HOS approach in its analysis, its findings contradicted Patterson and Okafor (2006) but supported Olayinka (2006) with respect to the relationship between employment and globalisation. In addition, they observed that there were variations in the levels of significance of the coefficients of custom/excise duties and trade openness, implying that custom and excise duties influenced the employment level of the sector and its competitiveness.

Seager (1997) utilised gross trade flows between the northern and southern countries of Organisation for Economic Co-operation and Development (OECD), as a share of gross domestic products (GDP) to capture their increasing integration in the global economy. A dataset covering 1970, 1975, 1980, 1985 and 1990 respectively was obtained for the 23 OECD economies; regression results showed that North-South trade and intra OECD trade had fundamentally different effects on patterns of production and employment in developed countries. Its econometric estimates indicated that even North-North trade could be associated with contraction in manufacturing employment. However, changes in intra OECD manufacturing trade balances had a minor effect on the structure of production and employment at the aggregate level.

The study by Spiezia (2004) was based on impact of trade on the manufacturing sector (by comparing labour intensities of exported, imported and non-tradable goods) of 39

developing countries. Using a set of panel data for a sample of 39 countries over different periods within the mid-1980's to mid-1990s; the results showed no significant employment impact of foreign domestic investment and domestic investment respectively. However, when the sample was disaggregated by income levels, the estimated regression showed a positive and significant impact of FDI on middle and high income countries; with the low income countries not showing any impact of FDI on employment. He opined that in 21 out of the 39 sampled developing countries, an increase in the volume of trade resulted in an increase in employment; nonetheless, increased integration produced a reduction in employment in the remaining 18 countries.

Weeraratne (2004) found that globalisation had a major impact on the textile and apparel manufacturing industry in Sri Lanka. Ordinary least square technique was used to analyse the data between 1990 and 2002. The results revealed an increase in exports and employment opportunities in the industry. Nevertheless, the globalisation process created an unhealthy import dependency in terms of technology and other inputs in the industry. The resultant effect was a low level of development of backward linkage industries and a decline in capital inflow to the local apparel industry.

A significant analysis and discussion on the subject matter was presented by Thoburn (2001) in South Africa. He collected data through a postal survey of some textile manufacturing companies and extensive interviews of selected personnel in these firms. The survey responses indicated that the performance of textile firms worsened over the years. Further, in their classic critique of impact of globalisation, Jean-Yves and Verdier (2013) concluded that 'globalisation goes hand in hand with decreased competitiveness of some industrial sectors like textiles' and consequently, job losses. However, according to Jean-Yves and Verdier (Ibid), it is hard to evaluate the impact of globalisation on job volume loss worldwide.

Joining the contentious debate of effect of globalisation on developing economies, Akpan and Atan (2015) using the error correction framework and utilising annual time series data for the period 1970-2011; submitted that globalisation had some positive impact on Nigerian agricultural, manufacturing and international trade sub- sectors. The authors observed that the magnitude and significance of the impacts varied from one sector to another. They opined that globalisation offered Nigeria, greater opportunities to improve on its economic performance in the selected sub-sectors.

Ogunyomi et.al, (2013) empirically investigated the impact of globalisation on economic security, with a reflection of the performance of the Nigerian manufacturing sector. Using co-integration and error correction mechanism (ECM) techniques with annual time series covering the period between 1981 and 2010, its findings revealed that globalisation had

negative impact on the performance of the Nigerian manufacturing sector in the long run but positive effects in the short run. Therefore, they recommended that the government and other policymakers should adopt a proactive and appropriate policy mix in economic, fiscal, monetary, political, institutional and risk management frameworks, in order to harness and maximally gain from globalisation while minimising its uncertainty shocks to the economy.

Danladi, et.al (2015) examined the impact of globalisation on the manufacturing sector of Nigeria using secondary data obtained from World Bank Development Indicators (WDI) between 1980 and 2013. Degree of openness, foreign direct investment, exchange rate and inflation rate were used to capture the causal relationship between globalisation and employment in the sector. Vector Auto-Regression (VAR) model was employed and its findings showed that a positive relationship existed between globalisation and employment in the manufacturing sector. The study supported the theoretical expectation that when a country interacts more with others, it raises her general production level and hence, manufacturing output. It concluded that Nigerian government should ensure continuous openness of its economy in a beneficial way and also put up measures to stem up the confidence of investors in the activities of the manufacturing sector.

Generally, empirical results show that the impact of globalisation on the manufacturing industry is largely disparate. It varies from industry to industry and from country to country. This observation is supported by empirical evidence in Kletzer (2001) which concluded that the processes and consequences of globalisation are unpredictable, and could be reversed or changed direction at any time. Despite the fact that the reviewed studies above established evidences of impact of globalisation on employment in Nigeria's manufacturing sector, research in this area is still relatively few. The literature is also unclear about the direction of impact of globalisation on employment in the sector and there is no common picture of the relationship. This study therefore aims at showing further evidence of the association between the two to contribute to literature.

Theoretical Framework and Methodology

The basic model to analyse the impact of globalisation on employment has been the Stolper-Samuelson/Heckscher-Ohlin theorem (Verick, 2006). Hence, the theoretical foundation of this work is rooted in the Heckscher-Ohlin-Samuelson model which discusses the effects of increased trade on the structure of industry and outputs of a country. This key contribution to

neoclassical trade theory predicts that trade liberalisation (a major component of the globalisation process) leads to an increase in demand for labour intensive exportable goods in developing countries (assuming that it is the relatively abundant factor), resulting in an increase in its price and wages for those employed in this sector. The growth of employment in exporting industries depends on the elasticity of demand for labour in this sector, which in turn is conditional on the supply elasticity. Eli Heckscher (1879–1952) and Bertil Ohlin (1899–1979) were two Swedish economists who postulated a theory which addressed two issues (what factors determine comparative advantages and what effect does foreign trade have on the factor incomes in the trading nations) that the Ricardian theory could not explain (Verick, 2006). The Heckscher–Ohlin theory focuses on the differences in relative factors endowments and factors prices among nations as the most important determinants of trade (under the assumption of equal or similar technology and tastes). It maintains that the sources of factors endowments determine a nation’s comparative advantage. This arrangement is the basis of the factor endowment theory, which analyses the differences in factors endowment across nations. According to this theory, a nation should produce and export a product for which a large amount of relative abundant resources is used and such country should import the commodity in which more of its relative scarce and expensive factors are used (Akpan et al, 2013).

Later, Paul A. Samuelson (1915-2009) added substantial rigour to the analysis and expanded the original Heckscher-Ohlin model. Building upon David Ricardo (1772–1823)’s earlier comparative advantage trade model, the Heckscher-Ohlin-Samuelson model (hereafter H-O-S) goes behind comparative advantage to ask, “What determines comparative advantage in the first place?” The H-O-S model’s answer is found by utilising Heckscher’s observations that (i) countries differ in their relative endowments of the factors of production, and (ii) production processes for different goods employ different relative intensities of the factors. Besides predicting trade patterns theoretically, the H-O-S model also yields implications of trade for factor prices and income distribution in the countries. Given the assumptions of the model, not only are relative factor prices but also absolute factor prices across countries are equalised. Thus, the H-O-S model has a growth dimension with implications for future outputs and trade patterns (Verick, 2006). ‘Empirical works as well as other considerations regarding the H-O-S model have led to the recognition that the theoretical model is widely employed’ (International Encyclopedia of the Social Sciences, 2008). The model is considered suitable for this study because of Nigeria’s relative labour endowment. Previous studies in Nigeria (Ogunrinola and Osabuohien, 2010; Paterson and Okafor, 2006; Olayinka, 2006; Aluko *et al*, 2004) applied it too. Time series regression was employed to show the impact of globalisation

on the manufacturing sector in Nigeria. Annual data from 1981 to 2013 were sourced from the Central Bank of Nigeria's Statistical Bulletin (2014).

Model Specification

HOS model has "variable factor proportions" between countries. Developed countries have a comparatively high capital/labour ratio compared to developing countries. In other words, the developed economies are capital-abundant relative to the developing ones, which are labour-abundant. The original HO model has been extended since the 1930s but the fundamental role of variable factor proportions in driving international trade remains unchanged. However, it has been modified to accommodate real world variables that affect international trade such as tariff as a way of discussing macroeconomic policies. For instance, Spieza (2004) posited a positive relationship between employment and investment and specified his model as:

$$L = (E_t, D_t, M_t) \quad (1)$$

Where: L is the level of employment; E is the rate of export; D is the output of non-traded goods; M is the level of imports.

In addition, Aryeetey (2006) formulated and estimated a labour demand equation of the form:

$$L_t = a_1 + a_2W_t + a_3Y_t + a_4X_t + \mu_t \quad (2)$$

Where L is total employment, W is the real minimum wage; Y is the real GDP; and X represents the degree of openness of the Ghanaian economy to other countries.

Ogunrinola and Osabuohien, (2010), another variant of HOS model in his study of Nigeria specified his model as:

$$\ln EMPM_t = \beta_0 + \beta_1 \ln RWG_t + \beta_2 \ln RCK_t + \beta_3 \ln ROMP_t + \beta_4 Z_t + \mu_t \quad (3)$$

Where:

EMPM is the employment level in the manufacturing; measured by the number of workers in the employment of manufacturing sector. *RWG* is real wage rate while *RCK* is the prime lending rate, representing the employers' cost of capital. *ROMP* is the real output of the manufacturing sector. *Z* is a measure of openness and μ_t is the error term.

The scope of Ogunriola and Osabuohien (2010) is relatively narrow (1990-2006), this study extends the period of coverage (1981-2013). Notably, its inclusion of real wage (REWG) as a predictor of employment is questionable (Bodkin, 1969; Grean and Kenan, 1982; Kuh, 1966). Theoretically, real wage rate is not a predictor of employment; it is driven by conditions in the factor (employment) market. Therefore, it is excluded in this study. Also, three variables were used as proxies for globalisation in contrast to Ogunrinola and Osabuohien (2010) which used two variables. In addition, this study incorporates recent information that the previous lacks.

Following Ogunrinola and Osabuohien, (Ibid), with slight modification, our estimated model is specified as:

$$\ln EMPM_t = \alpha_0 + \alpha_1 \ln MAOP_t + \alpha_2 \ln AMCU_t + \alpha_3 \ln TROP_t + \alpha_4 \ln NTXP_t + \alpha_5 \ln CUXD_t + \alpha_6 \ln LOR_t + \mu_t \quad (4)$$

Where: *EMPM* represents employment generation in the manufacturing sector annually. *MAOP* is the manufacturing outputs, refer to the total products of the sector in a year while *AMCU* is the average manufacturing capacity utilisation annually in the sector. It is the extent to which an enterprise or a nation actually uses its installed productive capacity. It is measured as the relationship between actual output that is produced with the installed equipment, and the potential output which could be produced with it, if capacity was fully used. Four variables are used to represent globalisation. The first is a measure of trade openness (*TROP*) defined as total external trade as a proportion of GDP of Nigeria {i.e. (export + import/GDP)}. Second, net exports (*NTXP*), which could be described as the economy's volume of exports less her imports annually. Third, custom & excise duties (*CUXD*) is another measure of globalisation, described as the total annual sum realised from levies on manufactured or locally produced goods and imported items in the country. In addition, labour-intensity (labor-output ratio- *LOR*) as a globalisation index is the ratio of real gross domestic product and labour force.

All variables are expressed in logarithms for easy stationarity to improve model fit and reduce skewness (Keene, 1995). From the classical perspective, *MAOP*, *AMCU*, *TROP*, *LOR* and *NTXP* are expected to exert positive effects on employment (*EMPM*) while *CUXD* is expected to correlate negatively with it in accordance with the H-O-S postulates. Symbolically, these expectations are: $\alpha_0, \alpha_1, \alpha_2, \alpha_4, \alpha_5, \alpha_6 > 0$; $\alpha_3, \alpha_7 < 0$.

Results and Discussion

Unit root and Co-integration Tests

It is common to test the stability of time series data in economic analysis before the main estimation. Most economic variables are not stationary at level hence, they have to be differenced (Gujarati, 2003). The unit root tests show that the variables are stationary at first difference. Therefore, the null hypothesis that the variables contain unit root is accepted at the conventional levels of significance (1%) critical value (Table 1). All variables are integrated of order one $I(1)$. The co-integration test (Tables 2 and 3) presents the results of the Johansen tests for co-integration amongst the variables. The results show that there is no conflict between the

Trace and Maximum Eigen values, they indicate that there are six co-integrating equations. It is then concluded that there exists long run relationships among the variables. To account for possible co-integration among the variables, Canonical Co-integration Regression (CRR) approach was employed (Table 4).

Table 1: Stationarity results

Augmented Dicken Fuller (ADF) test at First Difference				
Variables	Critical Values	t Statistics	Level of significance	Order of Integration
Employment generation (EMPM)	-6.180532	-3.661611	1%	I(1)
Manufacturing outputs (MAOP)	-5.344361	-4.356068	1%	I(1)
Average manufacturing capacity utilization (AMCU)	-4.030155	-3.661661	1%	I(1)
Trade openness (TROP)	-8.213743	-3.661661	1%	I(1)
Net exports (NTPX)	-5.634959	-4.296729	1%	I(1)
Custom & excise duties (CUXD)	-6.832611	-4.296729	1%	I(1)
Labour-intensity (LOR)	-5.458494	-4.284580	1%	I(1)

Source: Author's Computation with E-Views

Table 2: Johansen test for co-integration (Trace Value)

Hypothesized	Trace		0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.914017	221.1744	125.6154	0.0000
At most 1 *	0.745743	145.1125	95.75366	0.0000
At most 2 *	0.686560	102.6609	69.81889	0.0000
At most 3 *	0.573423	66.69636	47.85613	0.0003
At most 4 *	0.421402	40.28556	29.79707	0.0022
At most 5 *	0.373578	23.32398	15.49471	0.0027
At most 6 *	0.247727	8.824330	3.841466	0.0030

Source: Author's Computation with E-views

Table 3: Johansen test for co-integration (Max-Eigen Value)

Hypothesized		Max-Eigen	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.914017	76.06185	46.23142	0.0000
At most 1 *	0.745743	42.45166	40.07757	0.0265
At most 2 *	0.686560	35.96452	33.87687	0.0278
At most 3	0.573423	26.41081	27.58434	0.0701
At most 4	0.421402	16.96157	21.13162	0.1738
At most 5 *	0.373578	14.49965	14.26460	0.0459

Source: Author's Computation with E-views

Table 4: Canonical Co-integrating Regression (CCR) Results

<i>Variable</i>	<i>Coefficient</i>	<i>Std. Error</i>	<i>t-stat</i>	<i>Prob.</i>
	<i>(α_i)</i>			
<i>Intercept (α_0)</i>	6.700091	2.911457	2.301285	0.0300
<i>InMAOP</i>	0.168944	0.322340	0.524116	0.6048
<i>InAMCU</i>	-0.178340	0.191005	-0.933690	0.3594
<i>InTROP</i>	0.064881	0.010165	6.383080	0.0000
<i>InNTXP</i>	-0.184690	0.103966	-1.776447	0.0878
<i>InCUXD</i>	0.396428	0.095129	4.167272	0.0003
<i>InLOR</i>	-0.509490	0.442417	-1.151606	0.2604
<i>R-squared</i>	<i>0.960017</i>	<i>Long –run variance</i>	<i>0.004873</i>	
<i>Adjusted R-squared</i>	<i>0.950421</i>	<i>S.E. of regression</i>	<i>0.143800</i>	
		<i>S.D. dependent var.</i>	<i>0.645821</i>	

Source: Author's Computation with E-views 9

Regression Results

Canonical Co-integrating Regression (CCR) overcomes the deficiencies of ordinary least squares (OLS) regression in the case of highly collinear data. Besides, it allows an analysis of data in terms of independent latent variables or components and shows their long-run variance. Ardent proponents of CCR consider it superior to other biased regression methods; however, it is unlikely that there is a single superior technique for predictive modeling (Hoskuldsson, 1992). The estimated model (Table 4) shows that manufacturing output (MAOP) has positive impact on employment in the sector. Also, a positive relationship exists between the trade openness index and employment, implying that the more the country is open to global trade, the higher her employment level. This result is, however, not statistically significant since its probability values exceeded those of 1 percent and 5 percent levels of significance. Custom/excise duties are found to have a positive and significant (5 percent) impact on employment; that is, the higher the custom/excise duties, and the higher the employment generation. However, net exports have a negative effect on employment as a result of the country's integration with the global economy.

In addition, the average manufacturing capacity utilisation exerts a negative influence on employment generation meaning that there exists an inverse relationship between average manufacturing capacity utilisation and employment generation in the sector. A 1 percent increase in the average manufacturing capacity utilisation will lead to about 18 percent reduction in employment level. The R^2 shows that 96 percent deviations in the employment generation in the manufacturing sector are captured in the model by the explanatory variables while the remaining 4 percent are the factors affecting employment generation that are not captured in the model.

Manufacturing sector output has a positive sign, which is expected; however, it is significant only at 10 percent level. This could be attributed to continued importation of raw materials and finished goods. In addition, the sector faces stiff competition which has captured its market share (Carr and Chen 2002). The negative and non-significance of the coefficients of the average capacity utilisation and net export may be due to the fact that the economic, socio-cultural, technological, ecological and political development of the country are still low and not strong enough to ensure economic development through increased employment generation. Contrary to expectations, this study finds a significant and positive impact of trade openness on employment. Nevertheless, this is not plausible with the situation in the country and other developing countries whose manufacturing sector has been grounded due to stiff global competition [see Jean-Yves et. al (2013); Muhammad, (2011); Aluko, et al (2004)].

Capacity utilisation is low in the economy as a result of high cost of production and unfavorable business environment. More so, Nigerians prefer cheap foreign goods to locally made goods.

The response of the estimated model depends on the production specialty of the manufacturing sector (tradable or non-tradable). Given that it specialises in producing exportable goods (with international standards), then the demand for these products would have increased as a result of globalisation. Consequently, increase in employment rate would have been witnessed. In contrast, products of the sector are non-tradable, they are assumed to be of low quality compared to imported ones. In addition, the cost of doing business in Nigeria is complex and costly. Free trade zone through liberalisation and deregulation is another culprit that is hindering growth and development of the sector. All these illustrate barriers that the sector faces, which make it not to be globally competitive. Therefore, if there is no paradigm shift in the sector, the impact of globalisation on its employment level will be indeterminate.

5.0 Conclusion and Recommendations

The paper analysed the impact of globalisation on employment in Nigeria's manufacturing sector using broadly defined measures of globalisation. To account for possible co-integration among the variables, it employed Canonical Cointegration Regression (CRR) approach in its analysis. Using the time series data of Nigeria during the period from 1981 to 2013, this study provides new evidence on impact of globalisation on employment in the manufacturing sector of the economy. The results show that custom & excise duties and trade openness emerged as reliable predictors of employment in Nigeria's manufacturing sector. Although the study updates Ogunrinola and Osabuohien, (2010) but contradicts its submission (it reported an inverse relationship between trade openness and employment generation in Nigeria). Overall, the paper addresses an issue of policy significance and the empirical results are highly plausible. It is noteworthy to remember that Nigeria is a small player in the global economy, implying that she is highly dependent on the world economy.

The economic import of globalisation cannot be over-emphasised, however, policy makers should not shy away from its associated risks and costs. Nigerian government therefore, needs to make business environment more enabling in ensuring that cost of doing business in Nigeria reduces to the barest minimum so that the manufacturers can be motivated to continue in business and new ones can also come on board. Enabling environment would lead to good performance, consequently, higher profit before tax which tends to be a juicy avenue for the government to generate more revenue in form of corporate/companies' tax. The absence of infrastructural services has hindered production, there is the need therefore, to fix our

infrastructure deficits especially electricity and road network so that manufacturing productivity could be enhanced.

In addition, the direct association between employment and trade openness in our results raises a concern because it is far from what is obtainable in the economy. Trade openness or liberalisation has weakened the sector greatly and many manufacturing firms had gone into extinction as a result of unparalleled foreign competition. There should be political will on the part of the government to reduce or totally ban importation of some goods that can be produced locally so that the sector can recapture its market share and stiff competition be eliminated. Although, the era of drastic reduction of trade restrictions orchestrated by multilateral organisations like World Trade Organisation has come to stay, our government should adopt policies that will ameliorate the adverse effects of her openness to other countries.

Improvement in the capacity utilisation in the sector can be enhanced if the enacted law of usage of local content in manufacturing sector is implemented. Nigerians also should support the government by patronising locally made goods instead of foreign ones. In order to remedy the situation, special attention should be paid to the development and technological upgrade of the manufacturing sector in general and labour-intensive components in particular. A further study with more focus on trade openness is therefore suggested.

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