



TRADE OPENNESS AND VOCATIONAL EDUCATION AND TRAINING ON EMPLOYMENT GENERATION IN NIGERIA

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ABSTRACT

In recent times, the Nigerian economy has significantly undergone changes due to globalization and increased trade openness. Vocational education and training programs play very significant role in equipping the workforce with the skills needed to adapt to changing market conditions and take advantage of new employment opportunities created by trade openness. This study aims to analyze how trade openness and vocational education and training programs have affected employment opportunities in the economy between 1990-2021 using the panel regression framework (Pooled Least Square) techniques. Thus, the main objective of this study is to examine the impact of trade openness and vocational education and training on employment generation in Nigeria. The variables used in the study are Employment (EN) which is the dependent variable, while the independent variables are: Openness (OPEN); for trade openness, vocational education and training (VET), Foreign Direct Investment (FDI) and Exchange rate (EXR). Data collected were analyzed using Panel regression (Pooled Least Square) techniques. The study found that employment due to trade openness has a negative and significant effect due to increase in vocational education and training (VET). Exchange rate has positive and insignificant impact on employment while foreign direct has a positive but significant impact on employment. The result of the findings suggest that trade openness have both positive and negative effects on employment generation in Nigeria. Increased in trade can create new job opportunities in certain sectors, and in others it may lead to job loss. The study amongst others therefore recommends that policy efforts should focus on enhancing the quality and relevance of VET, in ensuring adequate funding, and improvement of societal perception of vocational education, enabling environment should be created by government for foreign direct investment to strive in order to boost employment.

Keywords: Trade Openness, Vocational Education and Training, Foreign Direct Investment, Employment, Exchange rate

JEL Classification Code: F13, M53, F21, E24, F31

1.0 Introduction

Trade openness and vocational education and training are two vital factors that play significant role in enhancing employment generation of any country especially as developing nations like Nigeria. In recent years the Nigeria economy has been undergoing substantial transformation, and understanding the impact of trade policies and vocational education on employment outcome is vital for policymakers, educators, and stakeholders. Trade openness is the liberalization of the exchange of goods and services across borders through increase integration among countries. These countries are joined together in terms of free movement of capital and labour and free foreign trade and finance (Igudia, 2004; Ijirshar, 2019). Trade liberalizations have put a lot of pressure on policy makers in the redesigning institutions and policies such that they are more effective and efficient in the

role which they play in any economy. According to (Lee 2005), rapid increase in the flow of goods and services across national borders is the most visible aspect of increase integration of the global economy over the decades. The adoption of trade openness is a major driving force behind globalization (ILO 2001). When nations engage in trade each country can use the resources which are most efficiently and effectively by concentrating on the activities which is best suitable for to pursue, therefore reap significant economies of scale. According to Gbosi (2014), nations trade with one another by exporting domestic goods and services which they have comparative advantages and they can efficiently produced and importing other goods that becomes inputs into their economic growth and development programme. Since trade is the mainstay of any economy that enhances economic growth and development through employment generation it is therefore necessary to have vocational education and training for effective production of goods and services that will enhance export. Trade policy in Nigeria since the 1960's has experienced extreme policy swings from high protectionism in the first few decades after independence to its current liberal stance. This has have impact on sectors such as manufacturing; production through vocational education and training and skills acquisition thereby creating employment for the people and opening up for trade.

Nigeria has increasingly embraced trade liberalization and opens up its economy to international markets, aiming to boost economic growth, attract foreign investment and enhanced competitiveness and thereby boost its exchange rate. Trade liberalization is an important reform use to improve the competitiveness of a country which can lead to better labor market outcomes due to vocational education and training. The effects of trade openness on employment generation in Nigeria are multifaceted, as increased trade can create new job opportunities in export-oriented industries while also posing challenges to domestic sectors which are faced with competition from imports. Vocational education and training play a vital role in equipping individuals with the necessary skills and competencies to meet the demands of the labour market. In Nigeria, there has been a growing recognition of the importance of vocational education in addressing the skills gap, increasing employment, and promoting economic development. By providing relevant training programs and practical skills to students, vocational education institutions can help enhance employability, foster entrepreneurship, and support sustainable job creation in various sectors of the economy which can then boost trade and thus open for international trade.

Thus, this study seeks to explore the interplay between trade openness and vocational education and employment generation in Nigeria. By examining the impact of trade policies on job creation, the effectiveness of vocational education programs in preparing individuals for the workforce, and the potential synergies between these two factors, this paper aim to shed light on the pathways through which Nigeria can harness the benefits of trade and vocational education to promote inclusive growth and sustainable employment opportunities. It is in this regard, this paper tends to examine the impact of trade openness and vocational education and training in promoting employment generation.

This paper is organized into five sections; section 1 is on Introduction, Section 2 focuses on review of related literature and empirical literature. Section 3 covers methodology while section 4 deals on result analysis and discussion, while section 5 is the conclusion and recommendation.

2.0 Literature Review

2.1 Conceptual Review

The economic concept of the word “Openness” or “Liberalization” is the total or partial elimination of administrative controls on certain economic activities. This implies less state interference on business activities or conversely, greater autonomy in decision making processes of private business sector (Gulaliyev et al, 2016). Carrier et al. (2013) maintains that liberalization is essentially a process of economic transition from command economy to free market economy normally embarked upon in order to achieve greater efficiency and consequently; economic recovery. In their efforts to thwart any suggestion that the process of liberalization is easy, Gulaliyev et al (2016) stressed that by its specific economic nature, openness is paradoxically, a complex process of regulating the usage of tangible and intangible resources; designed under the influences of changing global integration processes. Ijirsha (2019); trade openness which he described as the liberalization of the exchange of goods and services across borders in terms of free movement of capital and labour and free foreign trade and finances. Countries adopting trade liberalization policies make conscious efforts to reduce restrictions or barriers which are hindering the free exchange of goods and services between or among nations. These barriers include both tariffs such as duties and surcharges and non-tariffs barriers such as licensing rules and quotas which have stood as impediments to international trade

Hassan, et al. (2012); Carrier, et al. (2013) submitted that openness is a process of economic transition from command economy to free market economy normally embarked upon in order to achieve greater efficiency and consequently; economic recovery. Trade openness; serves as a mechanism of stimulating positive technological change by increasing competition, resulting in increase in innovation and expansion of growth and development (Intisar, et al. 2020;; Bunje et al., 2022; and Abinabo, & Abubakar). The benefits of trade openness to a nation as enumerated in Chaudhuri, et al. (2006) include access to goods and services at relatively cheaper rates as compared to domestic economy, access to modern technologies which are not common in the domestic market, exchange of ideas, accessing of latest information and frontiers of knowledge, modernization enhancement and encouragement of specialization and competitiveness to economies. They assert that the gains put together will enhance economic activities of any nation and thereby foster economic growth and development and the creation of employment. The desire to expand employment productivity is the core of every nation’s macroeconomic policies which is geared in reduction of unemployment and poverty alleviation (Umoru, 2013). Ghosh and Paul (2008) posit that trade openness aim to promote an economy’s exports to the world and creating employment opportunities to growth. This is in contract with Gairuzazi (2011) who argues that trade openness could impact positively on the economy in the medium- long run. Gbosi, 2014 is of the opinion that trade openness could lead to increase in gross domestic product and economic growth and development. Contrary to these arguments, it can be seen in developing countries that trade openness has exposed majority of the industrial units to the inherent risk of free market economy.

2.1.1 Concept of Vocational education and training

Vocational education and training is more successful at supporting youth labour markets. When they combine education (what they have learnt) with employment. Education – employment linkage theory describes this combination in terms of power-sharing between actors of from education systems and their counterparts in the employment system

Vocational education and training has been recognized world as a tool for the empowerment of people, especially the teaming youth, for sustainable livelihood and socio-economic development (Tambari, 2017). According to the International Labour

Organization (ILO), vocational education and training is designed to equip people with knowledge, know-how, skills, and or competences that is required in particular occupations or more broadly in the labour market (ILO, 2010). Vocational education is considered as a vital measure for the development of trained labour force which is required for economic growth of a country (Mustapha, 2016) Vocational education is a form of education whose main objective is the acquisition of skills and attitudes for the purpose of gainful employment in a specific occupation or professional field (Oresanya, et al, 2014). Various authors' such as Oresanya, et al. (2014); Hanushek, et al. (2017); Okoliko, et al. (2023) submitted that vocational education and training can significantly enhance employability and earnings of a country. According to Manabete and Bobboi (2018), vocational education and training is a panacea to unemployment. Vocational education and training trains individuals to acquire skills and knowledge in various occupations which are required in the world of work. The training however, must engender in the individuals the will to propose and solve problems related to human needs and development (Manabete and Bobboi, 2018). Vocational education and training significantly enhances the development of employability skills, which include communication, teamwork, problem- solving and time.

2.1.2 Trade Openness and Vocational Education and Training

Trade openness and vocational education and training are two vital factors that play significant roles in shaping the economic development and labour market outcomes of every country. The relationship between trade openness and vocational education and training has been a subject of interest among researchers and policy makers in recent times due to its implications for the labour force's skill development, competitiveness, and adaptability to changing market conditions.

Trade openness, characterized by increased international trade and foreign investment, has both direct and indirect implications for vocational education and training. On one side, greater trade openness can lead to changes in the demand for specific skills within the labour market. Industries which are more exposed to international competition may require workers with higher skills levels to remain competitive. This as a result can create more demand for vocational education and training programs that equip individuals with the necessary skills to meet industry needs or the world of work. More also, trade openness can influence the types of skills that are in demand within the economy. For instance, industries which are export-oriented may require workers with specialized technical skills or language proficiency so as to engage effectively in international trade. In this case, vocational education and training programs which are focus on developing these specific skills can play a vital role in order to enhance the country's export competitiveness and this may have effect on the foreign direct investment of the nation due to productivity and when productivity is enhance the first variable that is affected is trade which is then opened and when trade is opened as a result of productivity, the exchange rate of the country will be affected.

2.2 Empirical Review

2.2.1 Trade Openness, Vocational Education and Training and Employment

Trade openness and vocational education and training (VET) are critical factors influencing employment generation in various economies. Various studies have shown that trade openness/liberalization has improved employment. Studies such as Kakarlapudi (2010), investigated the impact of trade liberalization on employment in India. The study shows that both the overall and manufacturing employment trends experienced reduction in employment growth in the post-liberalization period compare to the pre-liberalization

period. Also the deceleration of employment growth in the import competing industries is higher than export competing industries.

Vaikosen and Magini (2023) examined the link between trade openness and governance on employment in Nigeria. The variables used employment, openness, government efficiency, proxy of governance, tariff, exchange rate and foreign direct investment. Their study found that employment due to trade openness has a negative and significant effect as a result of increase in tariff. Tariq, et al. (2018) investigated the impact of trade liberalization on employment, poverty reduction and economic development in Pakistan, using Error Correction Method (ECM). The study revealed that in the short run, there is a negative relationship between trade openness and per capital income in industrial sector, employed labour force and inflation while in the long run; trade liberalization has a positive association with per capital income in agricultural and industrial sector, employment, labour force

Meroyi, (2016) investigated the impact of trade liberalization on employment generation during the military and civilian regimes in Nigeria between the periods 1980-2012. Variables used are Employment, Foreign Direct Investment, Import, Military rule, Civilian Dispensation, Interest rate using the OLS and ECM technique. The result revealed that import intensity have a significant negative relationship with employment generation while military rule does not have significant effects on employment

Akinyemi, et al. (2014) analyzed trade liberalization and employment generation in Nigeria Using the Pooled least square technique. They used employment as dependent variable while the independent variables are foreign direct investment, Openness, tariff and wages. Their study revealed that employment generation as result of trade liberalization the key determinant is tariff structure as percentage increase will generate 73.4% of employment while other variables (wages, openness and FDI) effect on employment is not much.

Odejimi and Odejimi (2015) examined the impact of trade liberalization on the Nigeria labour market. The variables used are employment, openness, productivity, labor market, using the panel data regression techniques. Their study revealed that trade liberalization has a negative effect on the Nigeria labour market. Also, various studies on VET and employment have shown that vocational education can significantly improve employment generation. For instance, a study carried out by Kuczera, et al. (2016) on Building skills for All: A review of England, the study revealed that VET graduates in OECD countries often experience higher employment rates as compared to their counterparts from general education

Hampf and Woessman (2017) in their study, examines employer perceptions of VET graduates. The study revealed that employers often value the practical skills and work readiness of VET graduates, which can lead to higher employment rates. Oresanya, et al. (2014) in their study vocational education and employability: The Nigeria situation, revealed that for young graduates to be employable, employability skills should be incorporated into the curriculum of the tertiary institutions in Nigeria.

Hanushek, et al. (2017), in their study, General education, vocational education, and labour market outcome over the lifecycle show that individuals with vocational education had better early career employment outcomes as compared to those with general education. However, in the long run, the advantage diminishes which suggest a need for continuous skill upgrade.

Wolter and Ryan (2011), in their study Apprenticeship, highlight the economic benefits of VET for both individuals and society. Their study revealed that VET graduates tend to enjoy higher lifetime earnings and increased job security. Whereas, countries with well developed VET systems tend to exhibit lower youth unemployment rates and stronger economic performance.

From the review of relevant literature and empirical work in previous sections, it was found that most of the studies focused on trade liberalization and employment such as the work of Meroyi, 2016; Akinyemi, et al. (2014), Odejimi and Odejemi, (2015) others, Tariq, et al. (2018) Bunje et al., 2022; and Abinabo, & Abubakar, 2023). While others; Okoliko, et al. (2023), Hampf and Woessman (2017), Hanushek, et al. (2017), Oresanya, et al. (2014) focused on vocational education and training and employment. None of the studies simultaneously investigated how vocational education affects the influence of trade openness on employment level. The benefits of this study will enable policy makers to adopt good framework that could increase the level of employment by building vocational education and training centers in the various institutions of learning across the country at all levels. These centers should be made efficient in order to improve productivity and hence increase employment level.

2.3 Theoretical Framework

The framework which is put forward by Winters, 2000; Mcculloch et al, 2001; focuses on important channels that influence trade openness policy is that opening of trade has on the labour market and its effects changes on employment generation. (Prus,2001). With opening of trade, firms face changes in prices of goods that both they and other firms produce which result in change in incentives. The resultant change depends on how these relate to the labour market with its elasticity in supply of labour; the flexibility of the labour market (Winters, 2000a). If the supply of labour is perfectly inelastic, then any price change and incentives to change in wages with no change in employment. As propounded by Stolpher-Samuelson theory that an increase in demand for labour factors in the expanding sector and the sector-specific, capital is fixed in supply which then raises its nominal return then the utilization of more labour with given amount of specific capital leads to increase in the marginal physical product of the said capital and leads to a decline in marginal physical product of labour in the expanding sector. Thus, the real income of capital specific to the expanding sector increases or rises in terms of the export goods while the real return to labour decreases or falls in terms of the export goods. Thus, the real income of capital specific to the expanding sector rises unambiguously; since the price of import competing good falls with the opening of trade. In the case of the contracting import competing sector, the fall in demand for capital specific lowers its nominal return as a result of the sector-specific capital being fixed in supply, its use with a reduced amount of labour decreases its marginal physical product and its real return in terms of import-competing goods.

In the case of other goods, the real return to capital specific to the contracting sector therefore fall unambiguously, since the price of exporting good increase with the openness of trade. Labour real wage in terms of import competing good rises while the marginal product of the remaining labour in the sector increases. Whether primarily, export goods or import competing goods are purchased therefore depends on the distributional impact in terms of the mobile factor labour. For a more open trade regime is expected to increase wages in developing countries and help to alleviate poverty (Winters, 2000b). Although in reality, the predictions theorem does not often hold, even if it does, the least skilled in a country have to be used in production of tradeable goods for a positive distributional impact to occur. It is pertinent to state that little evidence have been proved to suggest that in reality this occurs. The extreme opposite is a perfectly elastic labour supply, where the changes are

purely adjustment in employment with wage remaining constant as pre-openness wages. Sodesteine, (1980) submitted that some citizens might need to be bribed into accepting the change from autarky to free trade, so that some could earn much on the transition, while others by being compensated for eventual losses, at least would not get hurt by it. From literature some country liberalizes and they have net gain on employment, (employment creation is higher than employment destruction) while others liberalize and they do not have net gain on employment (Akinyemi, *et al.*, 2014). Recent literature has shown that this could result from productivity due to vocational education and training (Kuczera, Field, and Windish 2016); (Moodie 2008); (Wolter and Ryan 2011). Vocational education and training can aid positive results in employment through job creation (Hampf and Woessman 2017). Thus it is important to state that the level of trade openness depends on the level of productivity a country create due to vocational and education and training it people has. Moodie (2008) is of the opinion that vocational education and training programs are highly effective in equipping students with job-specific skills and competencies that are required in various industries. Acemoglu and Robinson (2006) showed that trade induces institutional change through the transfer of skill-based technology which increases the income share of the middle class.

3.0 Methodology

3.1 Sources of Data

Secondary data were used for this study, with annual data from 1990 to 2021 on variables such as employment level, foreign direct investment, and exchange rate were sourced from CBN statistical bulletin and National Bureau of Statistics (various issues) and variable on vocational education and training were sourced from federal ministry of education and National bureau of statistics. (various issues). Data collected were analyzed using Panel regression (Pooled Least Square) techniques.

3.2 Model Specification

The study draws from the work of Meroyi (2016) who analyzed trade liberalization on employment generation during the military and civilian regimes in Nigeria. The variables used are employment (N) which is the dependent variable while the independent variables are import (M), export (X), foreign direct investment (FDI), exchange rate (EXR) and interest rate (INT)

$$N = b_0 + b_1M + b_2X + b_3FDI + b_4EXR + b_5INT + ut \quad 1$$

However, this study differs from Meroyi (2016) because it examines the link between trade openness, vocational education and training and employment in Nigeria. Thus, the dependent variable is employment (EN) while the independent variables are Openness (OPEN), vocational education (VET), foreign direct investment (FDI) Exchange rate (EXR)

$$EN = b_0 + b_1OPEN + b_2VET + b_3 FDI + b_4 EXR + ut \quad 2$$

Table 3.1: Definition of the variables

Variables	Description	Measurement	A priori sign	Sources of Data
EN	Employment is people who have job and are gainfully active			World Bank Development Indicator for Nigeria
OPEN	OPEN is a policy that encourage opening of borders for ease of exchange of goods and services	Outward openness = $\frac{\text{Export}}{\text{GDP}} \times 100$ Inward openness = $\frac{\text{import}}{\text{GDP}} \times 100$	+/-	World Bank Development Indicator for Nigeria
VET	Vocational education and training is skills and competencies needed to meet the demands of the labour market		+/-	Federal ministry of education and National Bureau of Statistics
EXR	Exchange rate is a rate at which one country's currency exchange for another country's currency	Bilateral exchange rate	+/-	World Bank Development Indicator for Nigeria
FDI	Foreign direct investment is a situation where foreigners come into the country to invest		+/-	World Bank Development Indicator for Nigeria

Author's computation

4.1 Methods of Estimation

Panel regression model (Pooled Least Square) techniques were used for the analysis.

Results and Discussion of Findings

This section presents the result of the estimated data, interpretation, discussion and evaluation on the standard evaluation criteria which is outlined in section 3

Results Presentation and Analysis

The results of the estimation are presented in the table 4.1 below on the summary of descriptive statistics.

Summary of the Descriptive statistics

Table 4.1: Result of Descriptive Analysis

	EN	OPEN	VET	FDI	EXR
Mean	26.53261	24.83409	3.852634	37.657621	32.72521
Median	28.11873	18.785320	2.986000	25.65432	28.30223
Maximum	326.2212	34.458.00	1.977300	201432.0	561783.6
Minimum	53.23074	20.72300	0.210000	10232.10	22453.05
Std. Dev.	1285432	22.865015	21.069390	70232.76	027004.9
Skewness	1.185957	6.166359	0.127663	1.076542	1.616634
Kurtosis	1.387869	3.024094	2.6847598	3.654322	3.190877
Jarque-Bera	3.676195	2.098825	10.97725	3.732132	222986
Probability	0.096511	0.076989	0.000000	0.154324	0.98530
Sum	1.44E+09	36364.33	775.9800	1167651	190.9474
Sum Sq. Dev	3.05E+33	116.609	695.3524	10.432+10	2.917053
Observations	32	32	32	32	32
Cross sections	4	4	4	4	4

Source: Author's computation using E-view

Table 4.1 presents the descriptive statistics of the data which is employed in the study period. The minimum and maximum value for employment for the real sectors is 326.2212 and 52.23074 while the mean is 26.53261 and median is 28.11873. The mean of OPEN is 24.83409 which is higher than the median of 18.785320 which suggests more trade openness during the study period. The mean of VET is 3.852634 and median is 2.98601 which indicate increment in VET. The mean of FDI is 37.657621 which is higher than the median 25.65432 which show increment in FDI during the period of study. The average value of EXR is 32.7251 and median is 28.30223 which indicate depreciation in currency.

The skewness which measures the degree of asymmetry amongst the variables have value greater than 0 in all the cases which indicates that the series is skewed to the right or have a long right tail. The kurtosis which measures the peakedness of the series with an expected value of 3 indicates that most of the series satisfy this condition. The jarque-bera normally which measures whether the residuals are equally distributed have probabilities greater than 0 in most cases and this indicates that the residuals are equally distributed. EN, VET are platykurtic as their values are lower than 3, meaning that the distribution is flat. On the other hand, OPEN and EXR have a value that can be approximated to 3. This means that the distribution is mesokurtic, meaning the distribution is long-tailed. FDI is leptokurtic as the values is more than 3, meaning that the distribution is wide.

Panel regression (pooled Least Squares results:

Dependent Variable: LOG(EN)

Method: Pooled Least Squares

Date: 05/21/24 Time: 12:29

Sample: 1990 2021

Included observations: 32

Cross-sections included:: 4

Total pool (balanced) observations: 32

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	23.81294	8.250609	2.319523	0.0296
OPEN	-0.071549	0.021217	-2.739089	0.0117
VET	0.624568	0.319657	5.880797	0.0084

LOG(EXR)	-0.509633	0.024640	-1.925759	0.0666
LOG(FDI)	-0.456757	0.053483	-4.399805	0.1749

R-squared	0.885644	Mean dependent var	13.73436
Adjusted R-squared	0.910345	S.D. dependent var	4.398540
S.E. of regression	0.198191	Akaike info criterion	1.380548
Sum squared resid	3.111370	Schwarz criterion	2.108837
Log likelihood	-19.41794	Hannan-Quinn criter.	1.389408
F-statistic	67.82199	Durbin-Watson stat	1.801215
Prob(F-statistic)	0.000000		

Source: Author's extract

4.2 Result Estimation and Discussion

The estimated panel regression model (Pooled Least Squares) for the variables estimated revealed the following results. A percentage increase in vocational education and training (VET) enhances a change in employment by 62.5%, which means that an increase in vocational education and training by 1% will increase employment rate in Nigeria. This result is in contract with Okoliko, et al. (2023), Hanushek, et al. (2017), Hampf and Woessman (2017), Oresanya, et al. (2014). The policy implication is based on the proposition that vocational education and training is expected of increasing employment in Nigeria. A percentage change increase in foreign direct investment rate result to 4.5% decline in changes in employment rate. That is employment rate is expected to reduce as a result of increase in foreign direct investment. 3.15% decline in employment rate as of a unit change in trade openness in the economy in Nigeria shows that opening up borders in Nigeria economy to facilitate trade result to decrease in employment rate in the economy, this is in contract with Akinyemi et al. (2014); (Meroyi, 2016). From the t-statistics only vocational education and training was said to be statistically significant at the 5% critical level while the other variables; FDI, EXR, and OPEN shows non-significant at the 5% critical level.

The F-statistics shows that the estimated coefficient of the variables VET, FDI, EXR, and OPEN have simultaneous significant effect on employment rate in Nigeria. thus, is based on the prob (F-stat) value that is less than 0.05, the stated earlier null hypothesis is rejected at the 5% significance level. Also, the adjusted R-squared result revealed that 88.5% changes in employment rate is explained by changes in VET, OPEN, FDI and EXR in Nigeria economy. Two sets of diagnosis test which were performed to examine the structured stability of estimated pooled regression model that capture the impact of trade openness vocational education and training on employment in Nigeria. The standard error regression value of (0.455%) is found to be less than a unit and relatively small as compared to the result the iterated regression models. This simply indicates that with the adopted estimated technique, the error of biasness is significantly minimized. The adjusted R-squared (0.91035) is less than the Durbin-Watson stat (1.801215), thereby signifies a non-spurious nature of the estimated regression model. The implication of the policy outcome indicate that the results reported are consistent and reliable for drawing policy inference and designing policy recommendations of employment through trade openness and vocational education and training in Nigeria.

5.1 Conclusion and Recommendations

In this study, data on yearly variables were utilized for the period 1990 – 2021 in addressing the impact of trade openness and vocational education and training on employment generation in Nigeria. The study made use of the panel regression (Pooled Least Square) techniques. The results of the regression show that the results under the estimation technique are robust. The results are in consistent with theoretical expectations and empirical findings of some work in the literature, such as the work of Akinyemi *et al*, (2014), Meroyi (2016). In terms of employment as a result of trade openness, it was found that vocational education and training is the main determinant as a percentage increase will generate 62.5% of employment, other variables (OPEN, & FDI & EXR) effect on employment was not much. From the regression result, only VET has a significant effect and a major contribution to trade openness and employment in Nigeria. These have been omitted in most studies. The findings of this study however show that this has great impact on trade openness, and employment. The cumulative significant of the study shows that VET, FDI, OPEN, EXR have simultaneous significant impact on employment generation in Nigeria. Vocational educational and training is a pivotal tool in preparing individuals for the world of work, which promote growth and economic development. The theoretical models and empirical studies reviewed show the multifaceted benefits of trade openness and VET on employment generation. Future research and policy efforts should focus on enhancing the quality and relevance of VET, in ensuring adequate funding, and improvement of societal perception of vocational education, enabling environment should be created by government for FDI to strive in order to boost employment and public-private partnership should be encouraged for the enhancement and development of the real sector through vocational education and training

REFERENCES

- Abinabo, P & Abubakar, A (2023). Trade openness and economic growth in Nigeria: Nigeria journal of management sciences. 24(2):214-228
- Acemoglu, D., & Autor, D. (2011) Skills, tasks and technologies: Implications for employment and earnings. In hand book of labor economics 4:1043-1171. North-Hollan
- Acemoglu, D, & Robinson, S. (2006). The role of institutions, *growth and development: Commission on growth and development; IMF working paper: No. 10, 2008.*
- Akinyemi, K., Ebiefe, V., Adekojo, T. A & Ibiyemi, I. A (2014). Trade liberalization and employment generation: *International Journal of Innovation and Scientific Research: 10(1):118-12.*
- Alege, P. O.(1996) Export and growth in Nigeria economy: A causality test” *The Indian journal of economic: XX111(111)280*
- Barro, R.J, & Sala-i-Martin, X. (1995), Economic growth. McGraw-Hill
- Bhagwati, J. (1988). Export promoting strategy: issues and evidence ‘ *World bank research observer, Washington, D.C. (3)27-56*
- Blom, A., Busse, M., & Werquin, P. (2005), Skills policies for economic diversification in the Arab region. International Labour Organization
- Bunje, M. Y., Abendin, S, & Wang, Y. (2022). The effects of trade openness on economic growth in Africa. *Open journal of business and management, 10(2), 614-642.*

- Carrier, F, Chaieb, I., & Errunza, V. (2013), Do implicit barriers matter for globalization? *Review of financial studies* 26, 1594-1739
- Chaudhuri, S., Yabuuchi, S., & Mukhopadhyay, U. (2006), Inflow of foreign capital and trade liberalizations in a model with an informal sector and urban unemployment" *Pacific economic review*: 11(1):87-103
- Gairuzazni, M. G. (2011), 'The impact of trade liberalization on the economic performance of OIC member countries. *Journal of Economic Cooperation and Development* 3(1)
- Ghosh, A. and Paul, S. (2008). Opening the Pandora's box? Trade openness and informal sector growth, *Applied economics*, Taylor & Francis journals, 40(15) 1995-2007
- Gbosi, A.N (2014). *Global trade policies and development finance: first edition* university of Port Harcourt press
- Gulaliyeva, M. G., Okb, N. I., Musayevaa, F. Q., Efendiyeva, M., & Agayevaa, S. R. (2016). Economic liberalization and its impact on human development: A Comparative analysis of Turkey and Azerbaijan: *International Journal of Environment and Science Education*. 11(17) 9753-9771
- Hampf, F., & Woessman, L (2017) .Vocational vs. General education and employment over the life-cycle: new evidence from PIAAC. *CESifo economic studies*, 63(3), 255-269
- Hanushek, E.A., Schwerdt, G., Woessmann, L., & Zhang L.(2017) General education, vocational education, and labour market outcome over the lifecycle. *Journal of Human Resources*, 52(1), 48-87
- Hassan, R., Mitra, D., & Ranja, P. (2012). Trade liberalization and unemployment theory: evidence from Indian. *Journal of development economics* 97(2): 269-280
- Igudia, P. (2004). Globalisation and economic development: Nigeria's experience and prospects globalisation and Africa's economic development, Ibadan, *Nigerian economic society*: 374-375
- Ijirshar, V. (2019) Impact of trade openness on economic growth among ECOWAS countries: 1975-2017, *CBN Journal of Applied Statistics*, 10(1):75-76
- ILO, (2010), *A Skilled Workforce for Strong Sustainable and Balanced Growth: A G20 Training Strategy*. International Labour Organization
- Intisar, R., Yaseen, M.R., Kousar, R., Usman, M., & Makhdam, M.S.A (2020). Impact of trade openness and human capital on economic growth: a comparative investigation of Asian countries. *Sustainability*, 12(7):29-30
- Karkarlapudi, K. K. (2010). The impact of trade liberalization on employment: evidence from India's manufacturing sector, centre for development studies, Prasantha Nagar, Ullor centre for development studies, Prasantha, Ullor. MPRA paper 35872 Thiruvananthapuram, Kerala.
- Krueger, A.O.(1997). Trade policy and economic development: How we learn. *American economic review*, 87(1), 1-22

- Kuczera, M., Field, S., & Windish, H. C (2016), Building skills for all: A review of England, OECD Publishing
- Manabete, S.S & Bobboi, U.(2018), Technical education and training for job creation in Nigeria. *International journal of business and administrative studies* 4(1):21-30
- Meroyi, Y. (2016). Comparative analysis of the impact of trade liberalization on employment generation during the military and civilian regime in Nigeria (1988-2012): *International journal of academic research in business and social sciences* 6(11):110-134
- Moodie, A. (2008). From vocational to higher education: An international perspective, McGraw-Hill Education.
- Mustapha, O. O., (2016). A literature review technical and vocational education. *Journal for studies in management and planning*
- Mwaba, A. (2000). Trade liberalization and growth: policy option for African countries in global economy" *African Development Bank economic research papers*, No.60
- Odejimi, S. O., & Odejimi, M. O. (2015). The impact of trade liberalisation on the Nigeria labour market: *International journal of economics commerce and management*, United Kingdom: 111(4):1-9
- (Oresanya, T.O, Omodewu, O.S, & Fashedemi A.O (2014). Vocational education and employability: The Nigeria situation. *Journal of poverty, investment and development*
- Prus. (2001, February 15). www.sussex.ac.uk Retrieved February 27, 2015, from www.sussex.ac.uk/: www.sussex.ac.uk/ Winters, L. (2000b).
- Tambari, D., (2017). Technical vocational and training as a tool for sustainable empowerment of youths in Niger Delta, Nigeria. *International journal of innovative social & science education research*
- Tariq, M. A., Adiq, K., & Muhammad, H. (2018) Impact of trade liberalization on employment, poverty reduction and economic development. Retrieved from <https://doi.org/10.1177/1035304615571225>
- Rattso, J., and R. Torvik (1998), 'Zimbabwean Trade Liberalization: Ex Post Evaluation?' *Cambridge Journal of Economics*, 22: 325-346
- Sodersteine, B. (1980) *International Economics* (2nd edition).
- Umoru, D (2013), 'Employment and International Trade Flow in Nigeria: VECM ANALYSIS: *International Affairs and Global Strategy* ISSN: 2224 - 574: 8 Paper, ISSN 2224- 8957 Online
- Vaikosen and Magini (2023), Impact of trade openness and governance on employment in Nigeria. *International Journal of Governance and Development (IJGD)* 6(1)164-172
- Winters, L.A, McCulloch, N., & McKay, A. (2001). Trade liberalization and poverty: The empirical evidence. Centre for research in economic development and international trade, university of Nottingham

- McCulloch, N., Winters, L.A, & Xavier, C. (2001). Trade liberalization and poverty: A hand-book: Centre of economic policy research, London,2001, 405
- Wolter, S.C., & Ryan, P.(2011), Apprenticeship. In E.A Hanushek, S., Machin, & L. Woessmann (Eds.) Handbook of the Economics of Education, 3: 521-576. Elsevier
- Woodward, D. (1992). Debt, Adjustment and Poverty in Developing Countries. London: Pinter Publishers
- World Bank. (2019). World Development Report 2019: The Changing Nature of Work. Washington. DC: World Bank.