

Investments and Unemployment Nexus in Nigeria: An Application of Vector Error Correction Model

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ABSTRACT: The main objective of this paper is to examine the impact of domestic and foreign investments on the rate of unemployment in Nigeria using data for the period of 1991 to 2018 and employed VECM to realize the objective. The outcome from the VECM estimation revealed that domestic and foreign investments were negative and significantly associated with unemployment while economic and population growths have significant positive sign with unemployment in the long-run and all the short-run coefficients were insignificant. Therefore, it is recommended that attentions should be channeled towards investment to ensure that available resources are attractive enough to attract both local and foreign investors at any given opportunity. Importation of capital goods should be encouraged since it has negative impact on unemployment rate. Access to finance at a subsidized interest rate to investors should be one of the top policy priorities because high cost of borrowing reduces the opportunities for the domestic investment. Likewise, investors in the real sector of the economy should be considered for the concessions of taxes largely due to the sector's direct effect on employment in the country.

Key words: Investments, Unemployment, Vector Error Correction Model, Johansen and Juselius Cointegration Test,

I. INTRODUCTION

Nigeria's position in sub-Saharan African and located on the Gulf of Guinea gives her unique and vital economic and geographical comparative advantages that offer her opportunities of an investment destination and access to compete in

global market (Anowor et al., 2019). Investment has been identified in theoretical and empirical studies as central determinant of economic growth and more so literatures suggest that investment could be a succor to expedite solutions to key macroeconomic challenge like unemployment. However, it appears to us and as also observed by Smith and Zoega (2009), that investment, notwithstanding robust empirical association it has with unemployment, is rarely seen as major variable or rather variable of interest in building unemployment model. This gives reasons to the need, as discoursed by Onodugo et al. (2014), to refocus attention on all kinds of investment like public and private (I.e. domestic private and foreign private) investments. The justification for the above assertion as suggested by Onodugo et al. (2014), is primarily because of flexibility, adaptability and regenerative tendencies of the private sector activities in propelling economic growth and development. Nevertheless, structural challenges contending with investment like market inefficiencies as identified by Onodugo et al. (2013), are fundamental causes of economic backwardness in the developing economies. Common knowledge of Macroeconomics obviously suggests that unemployment rate is a conflicting force against achieving desired set macroeconomic goals of any society and therefore represents an index of backwardness.

Figure 1 below show the trend of unemployment in sub-Saharan African countries for the sample period of 1990 to 2019. The trend indicates that there fluctuating movement from the first to the last period of the study (WDI, 2020).

Figure 1: Trends of unemployment in sub-Saharan African countries from 1990 to 2019.



Source: Authors' presentation using WDI, 2020 Data.

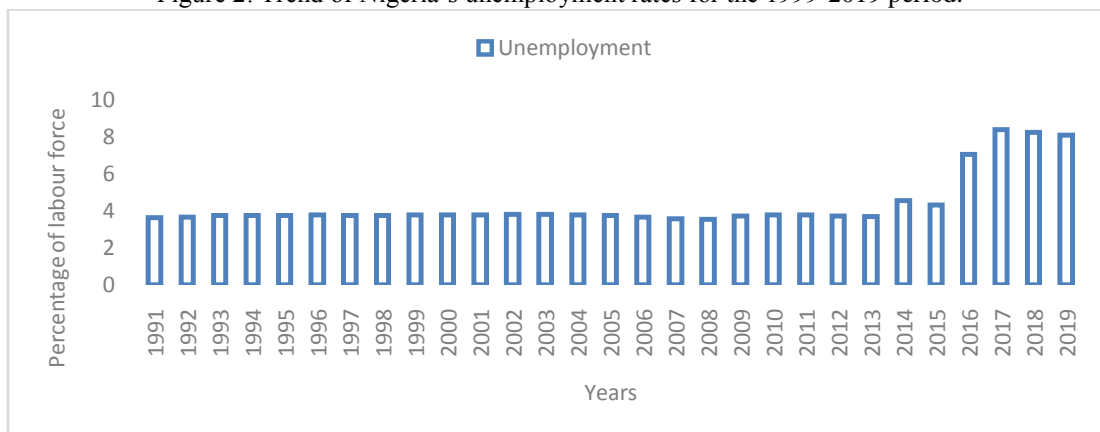
Economic theory explains that unemployment is a demonstration of economic imbalance in the economy. The cause can be traced to both macroeconomic and microeconomic sources (Iacovoiu, 2012). The macroeconomic sources which include ineffective demand, changes in economic structure, unevenness of the educational system to the labour market needs, policies that are unfriendly to the flows between savings and investment, and any other factor. The microeconomic sources follow-on fundamentally in the decisions of individual entrepreneurs on controlling or streamlining of activities, wage policy, sources of finance, assimilation of technological progress, and some other factors. Similarly, another important microeconomic factor as pointed by Iacovoiu (2012), is the supply of labour which has a lot to do with skill level, adaptability and flexibility of individual workers and individual's aspirations and motivation.

Nigerian economy experienced shock as the nation slipped into recession in 2016 which affected the country in specific social and economic terms. Growth figures showed that the

economy contracted by 2.06 percent in just two months. Prior to the recession story, Nigeria has been battling rising unemployment rate. Available data suggests that unemployment has been on a rising trend over the years as 4.1 percent in 1981 to 7.0 percent in 1987, it rose to 13.1 percent in year 2000, it rose further to 14.9 percent in 2008; the official unemployment rate as at 2018 was 22.6 percent, growing at a worrisome average annual rate of 16.02 percent. The postulation is that this trend in unemployment has given rise to intensified level of social ills such as kidnapping, banditry, militancy, robbery, rape, productive man-hour waste, and other activities which have led to immense socio-economic losses (Anowor et al., 2019).

Figure 2 below show the trend of unemployment in Nigeria for the 1990-2019 sample period. The trend indicates that from 1991 to 2013 there was relatively stability in the rate of unemployment. But from the year 2014 up to the year 2019, the trend experiences an increasing movement (WDI, 2020).

Figure 2: Trend of Nigeria’s unemployment rates for the 1999-2019 period.



Source: Authors’ presentation using WDI, 2020 Data.

A number of economies depend on investment to resolve several economic problems, crisis and challenges (Atuma et al., 2017). The reason is that investment is assumed to be attached to benefits such as increase in income per capita, employment generation, poverty reduction and consequently increase in the size of the economy. According to Iya and Aminu (2015), Investment is an important part of an effective economic system as it serves as major factor that facilitates growth of economies. Foreign direct investment has been seen to be useful to expanding economies as it provides cross-border employment opportunities (Agosin and Mayer, 2010). Likewise, domestic investment expected to create and provide employment opportunities to the country’s population.

II. RELATED LITERATURE REVIEW

Banda et al. (2016) analyzed the impact of economic growth on unemployment in south Africa using a secondary quarterly data on macroeconomic variables for the periods spanning 1994 to 2012. The Johansen Juselius indicates the existence of long-run relationship among the variables. The Vector error correction model results indicate that gross domestic product, budget deficit and real effective exchange rate have positive long-run impact on unemployment while labour productivity is negatively related to unemployment.

Mohsenia and Jouzaryan (2016) examined the role of inflation and unemployment on economic growth in Iran for the period of 1996 to 2012. The effect of inflation and unemployment on economic growth in the short-run and long-run periods were investigated and examined using ARDL model. The results showed the significant negative effect of inflation and unemployment on economic growth in long-run, which indicated that

inflation and unemployment decreased economic growth in long-run. This means that authorities should diligently endeavor plan to reduce, control inflation and unemployment.

Imiosi et al. (2017) investigates the impact of unemployment on economic growth in Nigeria using ordinary least squares multiple regression analytical method in analyzing annual secondary data for the period of 1980 to 2016. The result reveal that unemployment, population and labour force have significant impact on the country’s economic growth, while minimum wage rate does not have a significant impact on the country’s economic growth.

Adekola et al., (2016) investigates to prove whether unemployment is mainly caused by demographic change in Nigeria or there are other intrinsic factors responsible for this social challenge. A comparative analysis of the population and unemployment structure of three positively selected and heavily populated countries in the three different continents-Nigeria, China and USA were undertaken. The results show that population growth is not the sole factor responsible for growing population, but the reverse is the case for Nigeria as both population and unemployment are growing.

Ademola and Badiru (2016) investigate and determine the effects of unemployment and inflation on economic performance in Nigeria using secondary data on real gross domestic product, unemployment and inflation rate for period spanning 1981 to 2014. cointegration relationship was established among the variables using Johansen Juselius test for cointegration and the OLS result shows that unemployment and inflation rate are positively related to economic growth.

Orumie (2016) in his study applied the multiple regression models whose estimation co-integrates the inverse relationship between unemployment rate and gross domestic product considering population growth as well. The results revealed that since 1970, the rate of unemployment and population has been on the increase amidst declining gross domestic product. The result also reveals that unemployment and population growth contribute commensurably to gross domestic product. Furthermore, the result showed that unemployment contributes more to the national gross domestic product during this period in line with existing work.

Ayoade and Agwu (2016) investigated the past Nigerian government's interventional efforts and attempts at addressing the hydra headed problems of unemployment in the country and their effectiveness at encouraging the sense entrepreneurship in the country with a view to facilitating job creation for the teeming Nigerians job seekers. The finding from the study revealed that several intervention programmes introduced by successive governments in the country had failed to produce the expected results. Findings further indicated a plethora of bottlenecks which are principally hinged on corruptions, bureaucratic bottleneck vis-a-vis inconsistencies in government policies, political instability and lack of entrepreneurial skill by majority of unemployed Nigerians.

Maijama'a et al. (2019) examined the impact of population growth on unemployment in Nigeria. The study applied annual time series data from 1991 to 2016. Using dynamic ordinary least squares, the results revealed that population growth and exchange rate impacted positively on unemployment. Whereas consumer price index, per capita economic growth and foreign direct investment impacted negatively thereby reducing the rate of unemployment in the long-run.

Maijama'a and Musa (2020) examine the impact of crude oil fluctuation on the rate of unemployment in Nigeria using data for the period of 1991 to 2018 and employed VECM to realize the objective. The outcome from the VECM estimation revealed that population and economic growths were positive and significantly associated with unemployment while crude oil price and electricity consumption have significant negative sign with unemployment in the long-run but in the short-run only population growth was significant and positively signed with unemployment. From the granger causality, one-way causality runs from population growth to unemployment; economic

growth to unemployment; crude oil price to unemployment; population growth to economic growth; crude oil price to population growth; crude oil price to economic growth; electricity consumption to economic growth. Variance decomposition indicate that population growth responded highly to shock in unemployment whereas impulse response function revealed that unemployment responded positively to shocks in economic growth and crude oil price while negatively to population growth and electricity consumption.

Therefore, after a sufficient literature review, this paper can identify that investment can serve as a means of faster and sustainable channel for reducing the rate of unemployment thereby making domestic and foreign investors to automatically seek out the most favourable investment opportunities.

III. RESEARCH METHODOLOGY

The study modifies the model adopted by Maijama'a et al. (2019) that rate of unemployment is a function of population growth, inflation, economic growth, exchange rate and foreign direct investment and the model specified is given in Equation 1.

$$UNEM = F(POP, CPI, GDPC, REXC, FD) \quad (1)$$

Where t is the time trend; POP_t represent population growth, CPI_t represent consumer price index, $GDPC_t$ represent per capita economic growth, $REXC_t$ represent real exchange rate, FD_t stands for the foreign direct investments. In our model modification from Equation 1, we enhance the model by adding some important variables and removing some irrelevant variables in the analysis. The Equation 2 is shown with series modified to fit the investigation, where unemployment is set as a function of economic growth; domestic investment, foreign direct investments and population growth and it is presented as follows:

$$UE_t = f(DI_t, EG_t, FD_t, PG_t) \quad (2)$$

Where the time trend is denoted by t ; EG_t represent economic growth; PG_t stands for the population growth; DI_t is the domestic investment and FD_t foreign direct investment.

The Equation 2 is the functional form of the model where the error term is not captured, but Equation 3 provided the complete econometrics form of the model where the error term is expected to be normally distributed with zero mean and constant variance (Maji, 2015; Musa et al., 2019;

Musa et al., 2020). Therefore, the Equation 3 gives the econometrics model as:

$$\ln UE_t = \chi_0 + \chi_1 \ln DI_t + \chi_2 \ln EG_t + \chi_3 \ln FD_t \quad (3)$$

Here ln stands for the natural log sign; χ_0 is the constant term; $\chi_1 \dots \chi_4$ are the coefficients of slope parameters; EG_t is the economic growth; PG_t is the population growth; DI_t is the domestic

$$\begin{aligned} \ln UE_t = & \beta_0 + \sum_{i=1}^k \beta_1 \ln UE_{t-i} + \sum_{i=1}^k \beta_2 \ln DI_{t-i} + \sum_{i=1}^k \beta_3 \ln EG_{t-i} \\ & + \sum_{i=1}^k \beta_4 \ln FD_{t-i} + \sum_{i=1}^k \beta_5 \ln PG_{t-i} + \mu_{1t} \end{aligned} \quad (4)$$

Where ln is the natural logarithmic sign, K is the optimum lag length, t is the time trend (1990-2019), β_0 is the constant term; $\beta_1 \dots \beta_5$ are the long run coefficients of slope parameters; EG_t is

$$\begin{aligned} \Delta \ln UE_t = & \phi_0 + \sum_{i=1}^k \phi_1 \Delta \ln UE_{t-i} + \sum_{i=1}^k \phi_2 \Delta \ln DI_{t-i} + \sum_{i=1}^k \phi_3 \Delta \ln EG_{t-i} \\ & + \sum_{i=1}^k \phi_4 \Delta \ln FD_{t-i} + \sum_{i=1}^k \phi_5 \Delta \ln PG_{t-i} + \vartheta ECT_{t-1} + \mu_{2t} \end{aligned} \quad (5)$$

$$\begin{aligned} \Delta \ln DI_t = & \delta_0 + \sum_{i=1}^k \delta_1 \Delta \ln DI_{t-i} + \sum_{i=1}^k \delta_2 \Delta \ln UE_{t-i} + \sum_{i=1}^k \delta_3 \Delta \ln EG_{t-i} \\ & + \sum_{i=1}^k \delta_4 \Delta \ln FD_{t-i} + \sum_{i=1}^k \delta_5 \Delta \ln PG_{t-i} + \varpi ECT_{t-1} + \mu_{3t} \end{aligned} \quad (6)$$

$$\begin{aligned} \Delta \ln EG_t = & \alpha_0 + \sum_{i=1}^k \alpha_1 \Delta \ln EG_{t-i} + \sum_{i=1}^k \alpha_2 \Delta \ln UE_{t-i} + \sum_{i=1}^k \alpha_3 \Delta \ln DI_{t-i} \\ & + \sum_{i=1}^k \alpha_4 \Delta \ln FD_{t-i} + \sum_{i=1}^k \alpha_5 \Delta \ln PG_{t-i} + \upsilon ECT_{t-1} + \mu_{4t} \end{aligned} \quad (7)$$

$$\begin{aligned} \Delta \ln FD_t = & \varphi_0 + \sum_{i=1}^k \varphi_1 \Delta \ln FD_{t-i} + \sum_{i=1}^k \varphi_2 \Delta \ln UE_{t-i} + \sum_{i=1}^k \varphi_3 \Delta \ln DI_{t-i} \\ & + \sum_{i=1}^k \varphi_4 \Delta \ln EG_{t-i} + \sum_{i=1}^k \varphi_5 \Delta \ln PG_{t-i} + \partial ECT_{t-1} + \mu_{5t} \end{aligned} \quad (8)$$

$$\begin{aligned} \Delta \ln PG_t = & \pi_0 + \sum_{i=1}^k \pi_1 \Delta \ln PG_{t-i} + \sum_{i=1}^k \pi_2 \Delta \ln UE_{t-i} + \sum_{i=1}^k \pi_3 \Delta \ln DI_{t-i} \\ & + \sum_{i=1}^k \pi_4 \Delta \ln EG_{t-i} + \sum_{i=1}^k \pi_5 \Delta \ln FD_{t-i} + \theta ECT_{t-1} + \mu_{6t} \end{aligned} \quad (9)$$

Where ln is the natural logarithmic sign, K is the optimum lag length, t is the time trend (1990-2019), $\phi_0, \delta_0, \alpha_0, \varphi_0, \pi_0$, are the constant terms; $\phi_i, \delta_i, \alpha_i, \varphi_i, \pi_i$ are the short run coefficients of the parameters; EG_t is the economic growth; PG_t is

investment and FD_t foreign direct investment; μ_t is the stochastic error term. The Vector Error Correction Model (VECM) is structured with aid of Vector Autoregressive model (VAR) system of Equation as given in Equations 4, 5, 6, 7, 8 and 9 respectively. Equation 4 is the VECM long run model while the rest of the equations are the short run models.

the economic growth; PG_t is the population growth; DI_t is the domestic investment and FD_t foreign direct investment; μ_{1t} is the stochastic error term.

the population growth; DI_t is the domestic investment and FD_t foreign direct investment; $\mu_{1t} \dots \mu_{6t}$ are respective stochastic error term.

IV. DISCUSSION OF EMPIRICAL FINDINGS

Description of the data on all the variables employed in this study are offered in Table 1 and the areas of the description include the mean which shows the average values in the distributions; median which indicate the middle values in the distributions; maximum and minimum values which offers the highest and lowest values in the distributions; the standard deviation that measures

the amount of variation in the series; the skewness which measures how skewed the series is whether skewed positively or skewed negatively; the kurtosis values which measures how series are distributed whether leptokurtic, platykurtic or mesokurtic distributions and lastly the normality test through Jarque-Bera coefficients and their probability values which indicate whether the series is normally distributed or not.

Table 1. Descriptive statistics analysis

	lnUE _t	lnDI _t	lnFD _t	lnEG _t	lnPG _t
Mean	1.408	24.140	21.509	26.247	0.945
Median	1.325	23.864	21.417	26.245	0.944
Maximum	2.126	25.035	22.902	26.874	0.986
Minimum	1.263	23.321	19.517	25.698	0.911
Std. Dev.	0.237	0.639	1.0251	0.448	0.028
Skewness	2.411	0.276	-0.376	0.111	0.125
Kurtosis	7.207	1.338	2.018	1.426	1.413
Jarque-Bera	47.784(0.000)	(0.167)	1.785 (0.409)	2.947 (0.229)	3.009 (0.222)
Observations	28	28	28	28	28

Values in brackets are the P-values.

The investigation also employed correlation analysis to determine the direction of correlation amount the variables and to know whether the problem of multicollinearity exist or not among the independent variables (Pordan, 2013). The outcome shown in Table 2 indicates that there is positive correlation among all the

variables which implies that increase in any of the independent variables will cause rise in the dependent variable. Again, all the correlation coefficients for all the series are within the benchmark of 0.80 and this is the strong indication for the absence of multicollinearity among our variables.

Table 2: Correlation analysis

	lnUE _t	lnDI _t	lnFD _t	lnEG _t	lnPG _t
lnUE _t	1.	0.516	0.119	0.534	0.177
lnDI _t	0.516	1.	0.754	0.952	0.888
lnFD _t	0.119	0.754	1.	0.793	0.895
lnEG _t	0.534	0.952	0.793	1.	0.897
lnPG _t	0.177	0.888	0.895	0.897	1.

Philip Perron unit root test outcome is offered in Table 3 below. The outcome demonstrate that the null hypothesis of series non stationary could not be accepted for all the series at level form and after first differencing, all the series

were stationary and this suggests that the series have passed the unit root test and therefore, all the series including the explain and the explanatory series have the same order of integration as displayed in Table 3.

Table 3. Philip Perron unit root test result

Variables	Level		1st Difference		Decision
	Constant	Constant & Trend	Constant	Constant & Trend	
lnUE _t	1.075	0.054	-4.656***	-5.315**	I(1)
lnDI _t	0.270	-2.113	-6.389***	-7.096***	I(1)
lnFDI _t	-1.526	-1.551	-6.085***	-6.0809***	I(1)
lnEG _t	0.052	-2.074	-5.447***	-5.421***	I(1)
lnPG _t	-0.985	-1.521	-8.842***	-8.432***	I(1)

*** 1% significance
 ** 5% significance
 * 10% significance

The result of VAR lag-order selection criterion is reported in Table 4 and the outcome shows that the selection of lag order was made on the basis of 3 lags maximum in order to avoid

losing the degree of freedom and to allow for the model modification together with the achievement of realize well performed residuals. Also, the outcome for the selection of optimum lag length emphasized that the criterion nominated lag 3. Therefore, lag 3 was selected as the maximum lag for the data set and the Johansen Juselius test for cointegration was achieved via 2 lags for the VAR.

Table 4. Optimum lag selection criterion

Lag	LogL	LR	FPE	AIC	SC	HQ
0	80.939	NA	0.000	-6.075	-5.831	-6.007
1	206.547	190.924	0.000	-14.123	-12.661	-13.718
2	266.090	66.688	0.000	-16.887	-14.205	-16.143
3	320.750	39.354*	0.000*	-19.260*	-15.359*	-18.178*

*** stands for the optimum lag length.

Table 5 below shows the outcomes for the cointegration relationship among the series using Johansen (1991) test for cointegration. The tests of cointegration rank can then be confirmed via the trace and max-eigen value tests statistics and sometimes both the trace and max-eigen value tests might offered conflicting outcome. And if that happened, Alexander (2001) desires that trace test outcome should be chosen since it is stronger

compared to max-eigen test statistics for cointegration. The outcome of the test in Table 4 revealed that there exists two cointegrating Equations from both the two tests and therefore the null hypothesis of no cointegration relationship is strongly rejected and the alternative hypothesis of cointegration relationship is highly accepted and the series are said to be cointegrated.

Table 5. Johansen Juselius Test for Cointegration

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	P-values
C=0	0.901	136.188***	69.818	0.000
C<1	0.813	78.267***	47.856	0.000
C<2	0.597	36.254***	29.797	0.007
C<3	0.329	13.472	15.494	0.098
C<4	0.130	3.496	3.841	0.061

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	P-values
C=0	0.901	57.921***	33.876	0.000
C<1	0.813	42.012***	27.584	0.000
C<2	0.597	22.782**	21.131	0.029
C<3	0.329	9.976	14.264	0.213
C<4	0.130	3.496	3.841	0.061

*** 1% significance
 ** 5% significance

$$\ln UE_t = 8.158 - 0.872 \ln DI_t - 0.408 \ln FD_t + 0.377 \ln EG_t + 31.156 \ln PG_t + \mu_t \quad (10)$$

[6.541] [9.446] [-3.109] [-8.487]

from the Equation 10, $\ln DI_{t-1}$ and $\ln FD_{t-1}$ have a log run negative connection with the rate of unemployment in Nigeria and it is worth stating that both domestic and foreign investments have significant negative sign in explaining the rate of unemployment due their real t-statistic values been larger than 2 given in []. The outcome therefore,

advocate that 1% rise in domestic and foreign investments are associated with an approximately 0.872% and 0.408% decrease in the rate of unemployment. Thus, domestic and foreign investments are connected with creating job opportunities in the long run. This is in line with

empirical outcome of Anowor et al. (2019) for the same case study.

Again, the outcome confirms that 1% increase in economic and population growths causes significant rises in the rate of unemployment by approximately 0.377% and 31.156% in the long run. Economic and population growths increase are connected with increasing the level of unemployment. But whenever economic growth is not attended with creation of jobs, then the growth is regarded as the phenomenon of jobless growth. Mahadea (2003) and Banda et al. (2016) produced the same outcome using the case study of South Africa and Majjama'a and Musa (2020) also produced the same outcome using the case study of Nigerian economy. Our results also confirmed the hypothesis of jobless growth which states that Nigerian economic growth is failing to provide employments to the teeming population.

Table 6 showed the outcome of VECM which specified the indication of error correction. The outcomes demonstrate that the ECT_{t-1} coefficient has satisfied the necessary econometrics conditions of being negative, less than one in value

and significant as shown by its value of the t-statistics being greater than 2 in absolute term. Therefore, the speed of adjustment is -0.214% approximately and this implies that if deviation exists from the position of equilibrium, 21.4% of the deviation is corrected every year as the series moved towards reestablishing equilibrium while 78.6% is explained by other factors that influence unemployment in Nigeria apart from DI_t , FD_t , EG_t and PG_t respectively. The other factors may consist of demographic features, country's education level, and structure of monetary policy among other things. The outcome also shows that all the short run coefficients of the series were not significant in explaining changes in the rate of unemployment. The R-square value of 0.425 or 43% approximately. This implies that 43% variations in the rate of unemployment in Nigeria is jointly explained by domestic, investment, foreign investment, economic and population growths while 47% is captured by other factors that are not included in this model and this factor may consist of country's monetary policy structure, etc.

Table 6. VECM short run result

Variables	Coefficient	Std. Error	t-Statistic	P-value
ECT_{t-1}	-0.214***	0.322	-2.976	0.004
$\ln UE_{t-1}$	-0.640	0.567	-1.128	0.263
$\ln UE_{t-2}$	-0.250	0.478	-0.524	0.601
$\ln DI_{t-1}$	-0.225	0.235	-0.959	0.340
$\ln DI_{t-2}$	-0.086	0.179	-0.479	0.633
$\ln FD_{t-1}$	-0.063	0.100	-0.634	0.527
$\ln FD_{t-2}$	-0.036	0.063	-0.568	0.571
$\ln EG_{t-1}$	-0.647	1.126	-0.574	0.567
$\ln EG_{t-2}$	1.393	1.149	1.212	0.229
$\ln PG_{t-1}$	-54.987	33.210	-1.655	0.102
$\ln PG_{t-2}$	51.063	42.582	1.199	0.234
Constant	0.056	0.059	0.942	0.349
R-square	0.425			
Diagnostic tests				
VECM Serial correlation test		1.769 (0.116)		
VECM Normality test		9.910 (0.448)		
VECM Heteroscedasticity test		341.455 (0.320)		

*** 1% significance

V. SUMMARY, CONCLUSION AND RECOMMENDATION

This paper investigates the relationship between investments and unemployment in the case of Nigerian economy for the sample period of 1991 to 2018. The properties of time series variables were examined through the application of Philip Perron (PP) technique in testing the unit root property of the series, cointegration test using Johansen and Juselius test and Vector Error Correction (VECM) Model. The results of PP

revealed that all the variables in the model were stationary at first difference $I(1)$ and cointegrated. The VECM results indicate that domestic and foreign investments have significant negative impacts on the rate of unemployment while economic and population growths have significant positive effects on rate of unemployment in the long run period. The speed of adjustment toward equilibrium position was 21 percent every year. All the short run VECM coefficients were statistically insignificant in influencing the dependent variable.

In conclusion, investments were disaggregated into two of its components, domestic investment and foreign direct investment and each of the component appeared to be negatively related to unemployment. This means that each of these components is capable of creating opportunities for employment of idle resources thus reducing the level of unemployment in Nigeria. This study therefore found theoretical and empirical justifications for the assumption regarding the model of Two-Gap that filling Saving Investment gap will increase employment situations. If specified investments are properly carried out, they can inspire an improvement in the economy thereby reducing the country's rate of unemployment.

Therefore, it is recommended that attentions should be channeled towards investment to ensure that available resources are attractive enough to attract both local and foreign investors at any given opportunity. Importation of capital goods should be encouraged as shows to enhance growth. Access to finance at a subsidized interest rate to investors should be one of the top policy priorities because high cost of borrowing reduces the opportunities for the domestic investment. Likewise, investors in the real sector of the economy should be considered for the concessions of taxes largely due to the sector's direct effect on employment in the country.

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