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Case Study

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Analysis of net trade, FDI and GDP growth using cointegration, VECM, Granger causality and a regression approach: A case study of Sub Saharan African region

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Abstract

Net trade and Foreign Direct Investment (FDI) are both important factors of economic growth and development in Sub Saharan African (SSA) region. Many different studies have shown the impact of trade and FDI in economy growth in SSA countries. However, few is known about the effect in SSA region in overall. To use these factors in policy making and development planning, the following questions need to be addressed. As both factors impact the economy growth, can net trade (NT) historical performance be used to forecast FDI? Is there any short-run or long-run relationship effect among GDP growth, FDI and net trade? This paper has implemented the cointegration methodology to analyze the impact of net trade and FDI on GDP growth, used the Vector Error Correction Model (VECM) for long-run and short-run relationship effect, an Ordinary Least Square (OLS) regression to determine the significant impact of FDI and net trade on GDP growth and finally the granger causality test. This study shows a positive long-run relationship effect of FDI on GDP. The positive short-run effect of both FDI and net trade is also detected on GDP growth. The regression result shows that net trade has a significant impact on GDP growth and finally from the Granger causality test, the study shows that net trade Granger-cause FDI.

Keywords: *GDP growth, FDI, Net trade, Cointegration, VECM, Granger causality*

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1. Introduction

Net trade has been one of the most important factors of GDP growth in the Sub Saharan African (SSA) region. In the past decades especially during the age of pre-colonial civilization, three of the major trade zones that SSA has been featured with are the trans-Saharan trade in the north, the Indian Ocean trade in the east and the Atlantic trade in the west. According to the World Bank, net trade in goods and services is derived by subtracting import of goods and services from the exports of goods and services. Back to the 1960s and 1980s, trade has shown a significant increased going from around 45% of GDP to almost 60% followed by a big drop earlier in the 1980s. At the independence in 1960 for the majority of SSA countries, there was a positively promise of great expectations in economy growth. These expectations were broadly realized in the 1960s, when production grew and real per capita incomes increased appreciably (Calamitsis, 1999). But these expectations of potential growth declined in the 1980s which was caused by rising import prices and declining

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export prices in most of the poorer countries. The lack of appropriate economic policy led to that deterioration followed by the distortions prices, bad investments and increased of budget deficits. To respond to this crisis, new reforms such as adjustment and programs were moderately implemented in most of the SSA countries to address both existing macroeconomic problems and the structural constraint on economic growth. As a result, in the last three decades there was a significant increased started from 40% of GDP to almost 65% of GDP (Figure 1).

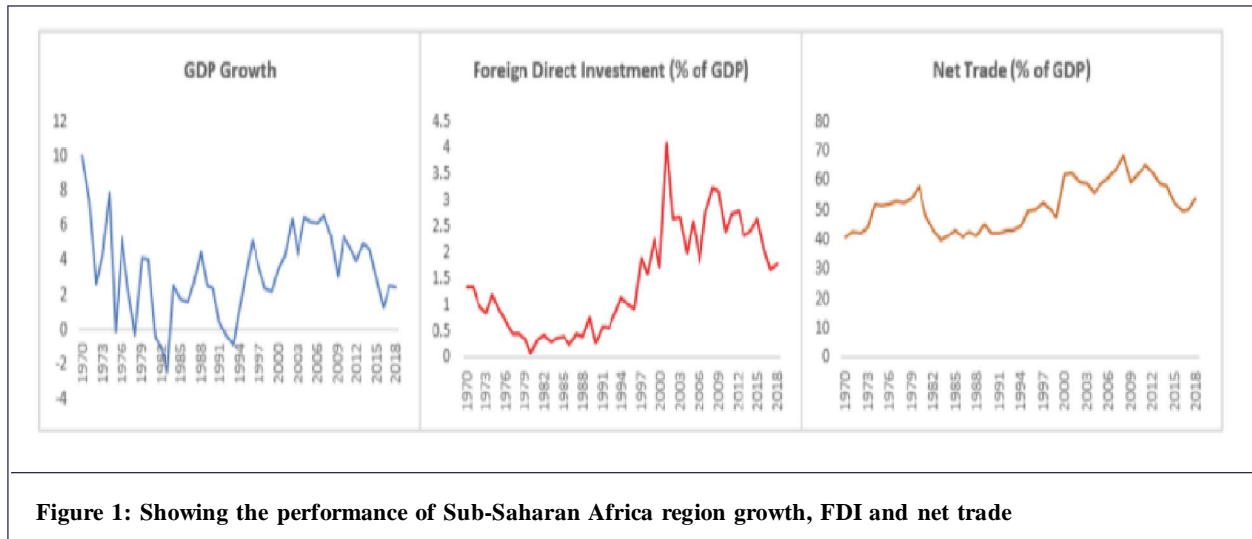


Figure 1: Showing the performance of Sub-Saharan Africa region growth, FDI and net trade

Trade sectors can be improved by the presence of capital which could also be generated by the Foreign Direct Investment (FDI). FDI brings more technologies, increases local productions and exports in an efficient manner, develops local skills and create jobs. FDI, in general, contributes to the sustainability of economic growth. in the case of Africa and especially in SSA region, FDI has become a very critical source of capital for investment in infrastructure and development to support local governments efforts in the key sectors of the economy (Anyanwu, 2006, 2011). Although SSA region does not benefit from the inflow of FDI as compared to other regions in the world, it remains a potential future inflow of FDI (Prince Jaiblai and Vijay Shenai, 2019). FDI represents a holistic important aspect of contributing to the development of exports and the improvement of the local productions. However, in order to attract more investment in an effective manner for development planning, one can ask the following question:

If a new development is designed to improve the net trade, what can be expected in the FDI as the result? Such questions require a statistical concept of causality that is based on prediction. Based on this rationale, I initiated this research for the statistical predictive modeling on my hypothesis describe below:

Hypothesis: Does Net Trade Granger-Cause FDI?

The aim of the current research is to determine, through analysis, if a signal of net trader “Granger-causes a signal FDI. The research also evaluates a cointegration method and Vector Error Correction Model (VECM) for an analysis of long-run and short run relationship and finally the impact of net trade and FDI on GDP growth in SSA using a linear regression model. This paper uses the World Bank indicators data such as net trade, FDI and GDP growth (all variables are in percentage of GDP).

The remainder of the paper is organized as follows: Section II provides an overview of a theoretical and empirical research of net trade, FDI in the SSA regions also the performance as compared the other regions. In Section III, the econometric and statistical models used, data sources, and definitions are also covered. Section IV presents how the experimental results of the econometric and statistical models are estimated from the data and the results are interpreted. Section V concludes the paper and provides policy recommendations.

2. Literature review

Several recent studies have shown the effect of net trade, FDI and other determinants factors on economic growth in SSA countries. Also, recent researches have been conducted in which scholars try to show the simultaneous effect of trade and investment on growth in SSA using a cross sectional analysis. Fredrick *et al.* (2019) examined the role of trade and investment on SSA region’s GDP growth. Their study showed that trade domestic investment and import affect growth in the region positively while export affect growth negatively. The empirical study of Onafowora and Owoye (2008) showed that export has positive impact on growth using the cross-sectional analysis applied on 12 samples of 12

SSA countries. An extensive review on the relationship between trade openness and growth since the 1970s is also found in (Harrison and Rodriguez-Clare, 2009) and covers almost 180 studies.

Recent studies have addressed a strategy for post-crisis growth using export and export diversification in the SSA (Vera Songue and Deborah Winkler, 2012). The authors found that the effect of exports on growth and employment is also influenced by export destination. Furthermore, the diversification of export can be also positively related to economic growth. In the other aspect of the previous analysis based on cross-country empirical research in 1980s Lewer and Berg (2003) found that the association between trade and economic growth was statistically significant. Their findings aligned to many empirical investigations regarding the size of the relationship which showed in average that a one percent increase in export was associated with one-fifth percent point increase in the Gross National Product (GNP).

In addition to the positive impact of trade on growth, FDI can bring important capital to countries. Prince Jaiblai and Vijay Shenai (2019) showed in their study that, over a period of time, high inflows of FDI in relation to GDP appear to be attracted to the markets with better infrastructures. Acquah and Jessie Woraewa (2017) operationalized their examination of the impact of FDI on domestic investment for 36 countries in SSA. Their results showed that financial development and human capital tend to lessen the crowding-in effect of FDI on domestic investment in SSA and could also be eventually led to a crowding-out of domestic investment after a certain threshold. Another evidence of an existing research using a panel data from 38 SSA countries and a dynamic system Generalized Method Moments (GMM), showed that inward FDI is more dynamic in non-resource-rich than in resource-rich countries and the impact of natural resource endowment and macroeconomic factors are more robust in the stock than it is the flow of inward FDI (Ezeoha Abel and Cattaneo Nicola, 2012).

Other research studies have recently been implemented on trade openness instead of the empirical perspective of trade as exports. Trade openness is widely defined as a nature of exports and imports activities of a country. Historical literature has shown that trade in terms of exports and imports positively impacted growth and also brought an important progress for the economic (Rodrik, 1999). Despite the scholar’s contribution of the impact, few studies have discussed on the degree of causality between the net trade and FDI. This research is focused on the association of net trade, FDI and growth.

3. Methodology

3.1. Ordinary Least Square (OLS), cointegration and Vector Error Correction Model (VECM)

The present study uses world bank data indicators (World Bank) from 1970 to 2018. This paper aims to first apply a neoclassical augmented growth model that was developed by Mankiw *et al.* (1992) which estimated the impact of trade (Net Trade) and investment (FDI) on growth. Following the empirical approach, the study uses the Net Trade (% of GDP), FDI (% of GDP), the growth (GDP) in Sub-Saharan Region. The variables of interests in this study are the Net Trade and the FDI. The simplest model to capture the impact of the variables on GDP is specified as:

$$GDP_t + \alpha + \beta_1 NT_t + \beta_2 FDI_t + \varepsilon_t \tag{1}$$

where GDP_t , the growth at time t , is a measurement of the economic growth in the SSA region. α shows the SSA-specific effect. NT_t is the Net trade being the trade measures that implies total exports minus total imports of the SSA region at time t . FDI_t is the foreign direct investment for the SSA region at time t . The ε_t , is defined as the error term, β_1, β_2 are the respective parameter coefficients of NT and FDI to be estimated in the study.

3.2. Estimations of the models

In this study, I estimate the long-run and short-run relationship among the growth, the Foreign Direct Investment (FDI), the Net Trade (NT) after testing the stationarity of the data. To explore the impact of FDI and Net Trade on GDP growth, I applied the cointegration Johansen test method and finally used the VECM to estimate the long-run and short-run effects. The equation of VECM is described as:

$$\overline{\Delta GDP}_t = a + \sum_{i=0}^L \hat{\beta}_i * \Delta GDP_{t-i} + \sum_{i=0}^L \hat{\delta}_i * \Delta NT_{t-i} + \sum_{i=0}^L \hat{\gamma}_i * \Delta FDI_{t-i} + \hat{\rho} * \hat{\varepsilon}_{t-i} \tag{2}$$

where L represents the number of lags in the model, rho hat ($\hat{\rho}$) the estimated long-run relationship coefficient, and eta hat ($\hat{\varepsilon}$) the deviation of from the long-run relationship in Equation (1).

3.3. Granger causality

The second approach that I explore in this study is the evaluation of the granger causality between the FDI and the Net Trade (NT). Granger causality is one of the popular econometric method that is used to study the causal relationship between two or more random variables (Granger, 1969). Following the definition in the context of this paper, if we consider the two predictive variables NT and FDI and assume that NT Granger-causes FDI, then the past information of NT can be used to forecast FDI. Granger causality is a probabilistic method which takes in account the causality and it is also applied in the model of linear regression.

$$NT_t = \sum_{i=0}^r b_{11,i} * NT_{t-i} + \sum_{i=0}^r b_{21,i} * FDI_{t-i} + \mu_{1,t} \quad \dots(3)$$

$$FDI_t = \sum_{i=0}^r b_{21,i} * NT_{t-i} + \sum_{i=0}^r b_{22,i} * FDI_{t-i} + \mu_{2,t} \quad \dots(4)$$

where r is the maximum lagged observations in the model. b is the matrix that expresses the parameters of the model and μ_1 and μ_2 are the variances that decreased by the inclusion of the predictive variables.

4. Results and discussion

I first conducted a stationary test at level to see if the data is stationary (Table1). I found that at level the data is not stationary which is not the case after I used the first difference (Table2). To evaluate the long-run relationship before

Table 1: Unit root test at level for stationarity				
Method	Statistic	Prob.**	Cross-sections	Obs.
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-1.19213	0.1166	3	143
Breitung t-stat	-1.33877	0.0903	3	140
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-1.63706	0.0508	3	143
ADF - Fisher chi-square	14.5296	0.0242	3	143
PP - Fisher chi-square	17.4078	0.0079	3	144
Note: ** Probabilities for Fisher tests are computed using an asymptotic chi-square distribution. All other tests assume asymptotic normality.				

Table 2: Unit root test at 1 st difference for stationarity				
Method	Statistic	Prob.**	Cross-sections	Obs.
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-14.9432	0.0000	3	141
Breitung t-stat	-10.0147	0.0000	3	138
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-15.3065	0.0000	3	141
ADF - Fisher chi-square	144.062	0.0000	3	141
PP - Fisher chi-square	159.675	0.0000	3	141
Note: ** Probabilities for Fisher tests are computed using an asymptotic chi-square distribution. All other tests assume asymptotic normality.				

applying the VECM. In Table 3, the result shows that there is no unit root at 1st difference of the data which shows a stationarity. The results of trace test and the maximum Eigenvalue from Table 4 shows an existence of three cointegration equations.

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-289.2011	NA	87.62867	12.98672	13.10716	13.03162
1	-239.9907	89.67237	14.69293	11.19959	11.68136*	11.37919*
2	-229.4611	17.78338*	13.81301*	11.13160*	11.97471	11.44591
3	-220.9873	13.18138	14.35334	11.15499	12.35943	11.60400
4	-213.4503	10.71938	15.75516	11.22001	12.78579	11.80372

Note: The selection criteria for the lag are based on the least AIC value. From table 3, we can see that the lowest AIC values on the range is at lag 2.

Unrestricted cointegration rank test (trace)				
Hypothesized no. of CE(s)	Eigenvalue	Trace statistic	0.05 Critical value	Prob.**
None*	0.601464	91.34382	29.79707	0.0000
At most 1*	0.443319	49.02573	15.49471	0.0000
At most 2*	0.381225	22.08063	3.841465	0.0000

Note: Trace test indicates 3 cointegrating eqn(s) at the 0.05 level; * denotes rejection of the hypothesis at the 0.05 level; and ** MacKinnon-Haug-Michelis (1999) *p*-values.

Unrestricted cointegration rank test (Maximum Eigenvalue)				
Hypothesized no. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical value	Prob.**
None*	0.601464	42.31809	21.13162	0.0000
At most 1*	0.443319	26.94511	14.26460	0.0003
At most 2*	0.381225	22.08063	3.841465	0.0000

Note: Max-eigenvalue indicates 4 cointegrating eqn(s) at the 0.05 level; * denotes rejection of the hypothesis at the 0.05 level; and ** MacKinnon-Haug-Michelis (1999) *p*-values.

After the stationarity and the cointegration are met, I lag the residuals by one period estimate the VECM (equation 2). The goal of using the VECM estimation model is to calibrate the short-run and the long-run changes in the variables and deviations from an equilibrium relationship that determines the behavior run. Both short-run and long-run relationship effects and cointegration equations results of growth of GDP, FDI and net trade are shown in Table 5. From the cointegration equation, we can see that the coefficient of the FDI (-1.731467) positively impacts the Growth in the long run. But this is not the case for Net Trade’s coefficient (0.058653) which negatively impact the growth in the long run (Equation 5).

$$GDP_{t-1} = 1.731467 FDI_{t-1} - 0.0586353 NT_{t-1} + 3.647204 \dots(5)$$

The result shows that cointegration equation coefficient is -0.959968 in Table 5 is significant with a probability of 0.000 (Table 6). With a negative coefficient (-0.959968) and a probability value of 0.000, the long run relationship is established. The predictors variables influence the dependent variable by 53% (*R*²). In addition, I can also see that the FDI has a long run positive impact on growth.

Table 5: Vector Error Correction estimates			
Cointegrating Eq:		CointEq1	
GDP(-1)		1.000000	
FDI(-1)		-1.731467 (0.50868) [-3.40388]	
NT(-1)		0.058653 (0.06626) [0.88517]	
C		-3.647204	
Error correction:	D(GDP)	D(FDI)	D(NT)
CointEq1	-0.959968 (0.20209) [-4.75026]	-0.015171 (0.05247) [-0.28911]	-0.542051 (0.43218) [-1.25422]
D(GDP(-1))	0.021912 (0.16441) [0.13327]	-0.003325 (0.04269) [-0.07788]	0.546186 (0.35162) [1.55335]
D(GDP(-2))	-0.184261 (0.13193) [-1.39666]	-0.028079 (0.03426) [-0.81966]	-0.414669 (0.28215) [-1.46970]
D(FDI(-1))	-2.093529 (0.74486) [-2.81064]	-0.588108 (0.19341) [-3.04075]	-2.235633 (1.59295) [-1.40345]
D(FDI(-2))	-1.514038 (0.62690) [-2.41513]	-0.004462 (0.16278) [-0.02741]	-2.343088 (1.34068) [-1.74769]
D(NT(-1))	0.155608 (0.08370) [1.85920]	0.069699 (0.02173) [3.20716]	0.087491 (0.17899) [0.48880]
D(NT(-2))	0.247181 (0.09003) [2.74552]	0.015061 (0.02338) [0.64426]	0.193818 (0.19254) [1.00664]
C	-0.072537 (0.26809) [-0.27057]	0.001586 (0.06961) [0.02279]	0.239242 (0.57333) [0.41729]
R ²	0.530576	0.443403	0.220853
Adj. R ²	0.444103	0.340872	0.077326
Sum sq. resids	121.8502	8.215450	557.2933
SE equation	1.790694	0.464969	3.829571
F-statistic	6.135757	4.324568	1.538755
Log likelihood	-87.67665	-25.65080	-122.6435

Table 5 (Cont.)

Error correction:	D(GDP)	D(FDI)	D(NT)
Akaike AIC	4.159854	1.463078	5.680153
Schwarz SC	4.477879	1.781103	5.998178
Mean dependent	-0.005217	0.017174	0.258913
S.D. dependent	2.401731	0.572715	3.986814
Determinant resid covariance (dof adj.)		8.380969	
Determinant resid covariance		4.724671	
Log likelihood		-231.5279	
Akaike information criterion		11.24034	
Schwarz criterion		12.31368	
Number of coefficients		27	

Table 6: Coefficient of probability values

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	-0.959968	0.202087	-4.750264	0.0000
C(2)	0.021912	0.164415	0.133273	0.8942
C(3)	-0.184261	0.131930	-1.396656	0.1652
C(4)	-2.093529	0.744859	-2.810640	0.0058
C(5)	-1.514038	0.626897	-2.415131	0.0173
C(6)	0.155608	0.083696	1.859200	0.0656
C(7)	0.247181	0.090031	2.745515	0.0070
C(8)	-0.072537	0.268087	-0.270573	0.7872
C(9)	-0.015171	0.052474	-0.289110	0.7730
C(10)	-0.003325	0.042692	-0.077883	0.9381
C(11)	-0.028079	0.034257	-0.819659	0.4141
C(12)	-0.588108	0.193409	-3.040748	0.0029
C(13)	-0.004462	0.162779	-0.027409	0.9782
C(14)	0.069699	0.021732	3.207160	0.0017
C(15)	0.015061	0.023377	0.644264	0.5207
C(16)	0.001586	0.069611	0.022788	0.9819
C(17)	-0.542051	0.432183	-1.254217	0.2123
C(18)	0.546186	0.351617	1.553354	0.1231
C(19)	-0.414669	0.282146	-1.469696	0.1444

Table 6 (Cont.)				
	Coefficient	Std. Error	t-Statistic	Prob.
C(20)	-2.235633	1.592952	-1.403453	0.1632
C(21)	-2.343088	1.340679	-1.747687	0.0832
C(22)	0.087491	0.178992	0.488799	0.6259
C(23)	0.193818	0.192540	1.006641	0.3162
C(24)	0.239242	0.573329	0.417285	0.6773
Determinant residual covariance		4.724671		
Equation: $D(GDP) = C(1)*(GDP(-1) - 1.73146717362 * FDI(-1) + 0.0586530150014*NT(-1) - 3.64720384034) + C(2)*D(GDP(-1)) + C(3)*D(GDP(-2)) + C(4)*D(FDI(-1)) + C(5)*D(FDI(-2)) + C(6) * D(NT(-1)) + C(7)*D(NT(-2)) + C(8)$				
Observations: 46				
R^2	0.530576	Mean dependent var	-0.005217	
Adjusted R^2	0.444103 S.D.	dependent var	2.401731	
S.E. of regression	1.790694	Sum squared resid	121.8502	
Durbin-Watson stat	1.870782			

This study used the Breusch-Godfrey LM Test to detect the serial correlation. The results provided in Table 7 show no serial correlation in the model of variables GDP, FDI and net trade. The stability of the model using the Cusum method is also analyzed and Figure 2 shows that the model is stable using variable growth as a dependent variable and both FDI and net trade as independent variables.

Table 7: Breush-Godfrey serial correlation LM test			
Breusch-Godfrey serial correlation LM test:			
Null hypothesis: No serial correlation at up to 2 lags			
F-statistic	0.984523	Prob. F(2,36)	0.3835
Obs*R ²	2.385526	Prob. Chi-Square (2)	0.3034

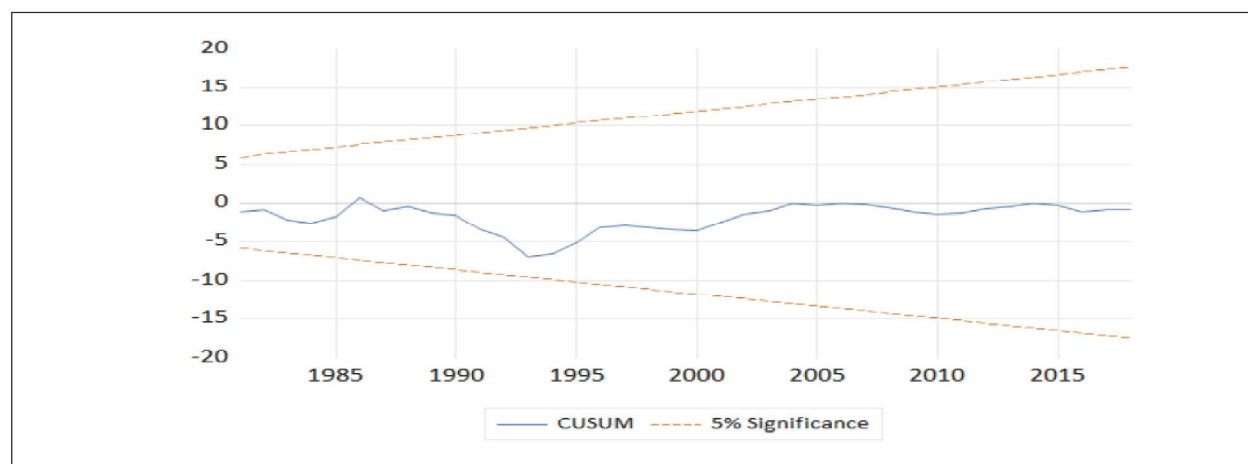


Figure 2: Shows the stability of the model for variables, GDP, FDI and Net Trade

The OLS regression using the stationary variables at 1st differenced is also conducted. From the results shown in Table 8, while the FDI is not significant, one unit changed of net trade positively affects the growth by 0.20 in point average with a significant *p*-value of 0.0245.

Table 8: OLS regression				
Dependent Variable: D_GDP				
Method: Least Squares				
Sample (adjusted): 1971 2018				
Included observations: 48 after adjustments				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D_FDI	-0.464410	0.621569	-0.747157	0.4589
D_NT	0.208302	0.089479	2.327947	0.0245
C	-0.211063	0.345011	-0.611757	0.5438
<i>R</i> ²	0.111877	Mean dependent var		-0.157917
Adjusted <i>R</i> ²	0.072405	S.D. dependent var		2.475442
S.E. of regression	2.384141	Akaike info criterion		4.636016
Sum squared resid	255.7857	Schwarz criterion		4.752966
Log likelihood	-108.2644	Hannan-Quinn criterion.		4.680212
<i>F</i> -statistic	2.834342	Durbin-Watson stat		2.714198
Prob(<i>F</i> -statistic)	0.069285			

Table 9: VEC Granger causality/Block exogeneity Wald test			
Dependent variable: D(SSA_GDP)			
Excluded	Chi-sq.	df	Prob.
D(FDI)	8.467420	2	0.0145
D(NT)	9.242219	2	0.0098
All	11.33881	4	0.0230
Dependent variable: D(FDI)			
Excluded	Chi-sq.	df	Prob.
D(GDP)	0.788261	2	0.6743
D(NT)	10.28734	2	0.0058
All	10.40668	4	0.0341
Dependent variable: D(NT)			
Excluded	Chi-sq.	df	Prob.
D(GDP)	8.524423	2	0.0141
D(FDI)	3.168715	2	0.2051
All	9.872496	4	0.0426

The last part of this study is destined to both Granger causality Wald test and the Granger causality pairwise test. In the Wald test (Table 9), with have three different scenarios. In the first scenario where GDP growth is dependent and both FDI and net trade are independent, it shows that FDI and net trade have both short-run influence on GDP with respective chi-square values of 8.46 and 9.24 and respective *p*-values of 0.0145 and 0.0098. The second scenario, with FDI as dependent variable, only shows that net trade has a short-run influence on FDI while GDP does not. In the third scenario with net trade as dependent variable, GDP growth has a short-run impact on trade while the FDI does not. Finally, all three results in overall show a short-run impact when independent variables are put together in each scenario.

In the Granger causality pairwise test (Table 10), the hypothesis question is answered. The result shows that net trade does Granger-cause FDI which means that the past of net trade can be used to forecast FDI.

Table 10: Pairwise Granger causality test			
Pairwise Granger causality tests			
Date: 10/03/20 Time: 00:16			
Sample: 1970 2018			
Lags: 2			
Null hypothesis:	Obs.	F-Statistic	Prob.
D_FDI does not Granger-cause D_GDP	46	0.15065	0.8606
D_GDP does not Granger-cause D_FDI		0.64030	0.5323
D_TRADE does not Granger-cause D_GDP	46	0.19467	0.8239
D_GDP does not Granger-cause D_TRADE		3.18373	0.0518
D_TRADE does not Granger-cause D_FDI	46	6.14081	0.0046
D_FDI does not Granger-cause D_TRADE		0.58383	0.5623

5. Conclusion

GDP growth in SSA region is designed to represent a holistic measure of the economic performance of the region. From 1970 to 2018, SSA region has shown an average growth of 3.34%. Many factors such as economic policy, governance, exchanges rate, foreign policies, trade policy and economic stability impact GDP growth. However, in order to use the GDP growth indicators data in efficient manner for policy making and development planning, a predictive model need to be analyzed. In this paper, I evaluate the connectivity among net trade, FDI and GDP growth. To measure the impact effect of FDI and Net Trade on GDP growth, Johansen’s cointegration method followed by VECM has been applied for short-run and long-run relationship effects. from this, a positive significant longrun relationship effect of FDI is identified on GDP growth and this was not the case for net trade which showed a negative impact on GDP in the long run relationship.

In addition, two Granger causality tests have been used in this study. In the Wald test, the empirical result from the first scenario with GDP growth as a dependent variable shows that both FDI and net trade have significant short-run effect on GDP growth. The second scenario with FDI as dependent variable, only Net Trade shows a short-run significant effect. Finally, in the last scenario with net trade as dependent variable, only GDP growth shows a significant short-run effect of trade while FDI does not.

The Granger causality pairwise test is used in this study to answer the hypothesis question. The test result from the Pairwise test, shows that net trade does Granger-cause FDI. Hence, the study used an OLS regression approach to analyze the impact of FDI and trade on GDP growth. The result from the regression shows that one unit changed in net trade significantly impact GDP by 0.20 point in average.

In the recent years SSA region has benefitted from FDI in several sectors such as infrastructure, local government businesses and retails stores. To increase and maintain the FDI inflows, governments is SSA region need to have good policy and economy stability. Another import factor is net trade. The GDP growth in SSA region is also impacted by Net Trade. This sector needs strong policy making and development planning. To boost the productivity in trade, governments need to consider the allocation of investment flow in industrialization which will allow the transformation of raw materials.

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