# International Trade, Foreign Direct Investment, and Economic Growth in Togo's Economic Perspective

Ignatius Abasimi[1*]    Martin A. Y. Agbassou [1]    Jian Zhang [2]    Xuan Li [2]

1.School of Economics, Northeast Normal University, Changchun, Jilin, China.

2.Associate Professors at the School of Economics, Northeast Normal University, Changchun, Jilin, China.

* E-mail of the corresponding author: abasimiignatus@gmail.com

**Abstract**

In contemporary times, economic globalization and liberalization is as a result of international trade and the significant role of foreign direct investment. Due to absolute and comparative advantage, and product differentiating, its quintessential and imperative for countries to engage in international trade, not only to increase their consumption basket, but also to expand and strengthen their economic growth through international capital inflows, transfer of technology, skilled labour and competitive domestic markets. This study investigates the relationship between international trade, foreign direct investment, and economic growth in Togo's economic perspective. The study employed the Autoregressive distributed lag and Error correction models for the econometric and empirical analysis. The empirical results reveal that in the short run Togo's economic growth can be boosted and revitalized through foreign direct investment, trade freedom, trade openness, and exchange rate appreciation, however, in the long run only trade openness promote economic growth. Foreign direct investment and trade can be seen as a vehicle for Togo's economic growth and development.

**Keywords:** Autoregressive distributed lag, foreign direct investment, trade openness, international trade, Togo.

## 1. Introduction

Foreign direct investment and trade are often seen as important catalysts for economic growth in the developing countries (Makki S. and Somwaru A., 2004). Foreign direct investment (FDI) is an investment made by a company or an individual of one country in a firm or business located in another country. FDI sometimes leads to multinational corporations (MNC). It generally happens when the investor acquires foreign business asset through ownership or controlling interest of a foreign company. Foreign direct investment may include transfer of technologies or management as well. We distinguish essentially three types of foreign direct investment: horizontal, vertical and conglomerate. A horizontal direct investment is when the investor is operating in the same activity as in its home country. The vertical one is when the investor is operating in different activity but related to the one in its home country. The conglomerate one is when the investor is operating in a completely different activity. International trade on its side is the exchange of goods and services between countries. It is difficult for an open economy country to produce all the goods and services needed by its population at a competitive price. The absolute and comparative advantages theories showed us the importance of exchange between countries. Trade facilitates more efficient production of goods and services by shifting production to countries that have comparative advantage in producing them (Makki S. and Somwaru A., 2004). Almost all goods and services can be found in the international market. The Imports are the products bought from the international market and the exports are the products sold to the international market. International trade allows countries to use their resources efficiently. As explained, international trade and foreign direct investment only happen in open economies. Some authors argue that one leads to the other; some even say that they are complementary or they substitute each other. Generally, foreign direct investment can answer problems of import and export because when foreign brands come to a country with their products, there is no need to import the same products from abroad. Similarly, the foreign company doesn't necessarily have to import the materials needed for its products; the company can directly produce in the host country. The advantages of foreign direct investment on the economy are many. It provides more jobs, increases the purchasing power, transfers technologies and knowledge, develops the human capital resources and increases productivity. For example, according to Chen C. (2018) by the end of 2016, China had attracted a total of US$1.35 trillion in FDI stock, making it the largest FDI recipient in the developing world. The large volumes of FDI inflows have contributed greatly to China's economy in terms of capital formation, employment creation, export expansion and technology transfer, and have exerted significant impacts on its economic growth and structural changes. In the other hand, FDI can impact negatively the economy. It can hinder domestic investment; occasionally affect the exchange rate on the advantage of one country and the disadvantage of the other.  It usually kills the local manufacturing industry, over exploits the local raw materials and local workers for productivity increasing purpose.  International trade on its side has also a lot of advantages for an economy. It helps for an optimum use of the country resources, almost all type of good and services are available, it provides stability of prices, develops transport and communication sectors, it creates cordial relations among countries. In the other hand, it kills local companies because of the high competitiveness; it creates economic and political dependence, it favors the import of some harmful products.  The focus of this paper is to check the impacts

of foreign direct investment and international trade in Togo's economic growth. We have obtained data from 1995 to 2017 and by using the auto regressive distributed lag, we will check the causality of this economic variables.

## 2. Literature review

The relationship between international trade, foreign direct investment and economic growth is one of the interesting debates in international economics. Researches have done a lot in that field using various data and methodologies. The results differ from one author to another.

Foreign direct investment positively affects the economic growth of a country through its contributions to various sectors development. International trade does not necessarily have the same impact according to the following authors. Li X. and Liu X. (2005) investigated whether foreign direct investment (FDI) affects economic growth based on a panel of data for 84 countries over the period 1970-1999. They used single equation and simultaneous equation system techniques to examine the relationship. They found a significant endogenous relationship between FDI and economic growth from the mid-1980s onwards. FDI not only directly promotes economic growth by itself but also indirectly does so via its interaction terms. The interaction of FDI with human capital exerts a strong positive effect on economic growth in developing countries, while that of FDI with the technology gap has a significant negative impact.

Jamshid Damooei and Akbar Tavakoli. (2006) estimated the output elasticity of foreign direct investment (FDI) and imports in Thailand and in the Philippines from 1970 to 1998. They applied a CES generalization of Cobb-Douglas production function, the output response to FDI is the same in both countries, but imports affect Thailand more than the Philippines. The FDI contribution to every one percentage growth point is about 0.05 of a percentage points in each country where imports contribute about 0.47 of a percentage points in Thailand and 0.31 of a percentage points in the Philippines. As a result, the foreign investment and imports contribute about 52 percent of every one percentage growth point in Thailand compared to a lower 36 percent in the Philippines. The remaining effects on the economic growth are from labor and domestic investment. Both countries are labor intensive, but the impact of labor is more significant in the Philippines. The Philippine economy is also more domestic capital intensive than the Thai economy. Furthermore, the FDI path shows that the effect of foreign investment is more pronounced in the Philippines during the second half of the 1990s, whereas the imports are more effective in Thailand since 1994.

Wang Y. (2010) found by focusing on the economy of Canada that FDI generates strong effects on total factor productivity (TFP) growth through both forward and backward inter-industry linkages, and increase in an industry's absorptive capacity raises the effects of FDI on TFP growth through forward inter-industry linkages.

Arısoy İ. (2012) estimated the contributions of Foreign Direct Investment (FDI) to the aggregate growth and its impact on total factor productivity (TFP) of Turkey from 1960 to 2005 using aggregate production function. The paper identified also the link between FDI, TFP and economic growth. The empirical results indicate that FDI contributes positively to TFP and growth via capital accumulation and technological spillovers.

Guru-Gharan K. (2012) employed Toda-Yamamoto-Dolado-Lutkephol augmented VAR technique for testing Granger causality among international trade, foreign direct investment and economic growth. The study also focuses on the post liberalization period and clearly shows that the post- liberalization period significantly differs from the pre-liberalization period in the GDP-Export-FDI nexus. He found strong support for Export-led and Foreign Direct Investment led growth hypotheses only in the post liberalization period.

Agrawal G. (2015) examined the relationship between foreign direct investment (FDI) and economic growth in the BRICS and other economies, Brazil, Russia, India, China and South Africa over the period 1989-2012. The empirical methodology cointegration and causality analysis at panel level is applied. The results confirm that foreign direct investment and economic growth are cointegrated at the panel level, indicating the presence of long run equilibrium relationship between them. Results from causality tests indicate that there is long run causality running from foreign direct investment to economic growth in these economies.

Ofori D. and Asumadu G. (2017) examined the effects of FDI inflows and trade in the economic development of Ghana, using annual time series data for the period 1986 to 2013, through the application of (ADF) unit root, Johansen's co-integration test and Granger causality test. The results affirmed that FDI inflows could lead to the economic growth of Ghana. However, the result of Granger causality test for Trade indicated that there was (independence) links between Trade and GDP for the Ghana scenario.

Ali N. and Xialing L. (2017) analyzed the relationship of international trade, foreign direct investment and economic growth in Pakistan's economic perspective. The study utilized time series data over the period of 1991 to 2015. The results of the study clearly show that there is a positive relationship among international trade, foreign direct investment and economic growth in Pakistan's economic perspective.

Other authors argue that International trade can impact economic growth but not foreign direct investment. Some authors even argue that there is no positive effect link between the three variables. Nath H. K. (2009) used a fixed effects panel data approach to examine the effects of trade and foreign direct investment (FDI) on growth of per capita real GDP in 13 transition economies of Central and Eastern Europe, and the Baltic region from 1991

to 2005. A significant positive effect of trade on growth is a robust result for transition economies of this region. In addition, domestic investment appears to be an important determinant of growth. In general, FDI does not have any significant impact on growth in these transition economies.

Azman-Saini W. N. W., Baharumsha, A. Z. and Law S. H. (2010) investigated the systemic link between economic freedom, foreign direct investment (FDI) and economic growth in a panel of 85 countries. The empirical results, based on the generalized method-of-moment system estimator, reveal that FDI by itself has no direct (positive) effect on output growth. Instead, the effect of FDI is contingent on the level of economic freedom in the host countries. This means the countries promote greater freedom of economic activities gain significantly from the presence of multinational corporations.

Belloumi M. (2014) examined the relationship between foreign direct investment (FDI), trade openness and economic growth in Tunisia by applying the bounds testing (ARDL) approach to cointegration for the period from 1970 to 2008. The bounds tests suggest that the variables of interest are bound together in the long run when foreign direct investment is the dependent variable. The associated equilibrium correction is also significant, confirming the existence of a long-run relationship. The results also indicate that there is no significant Granger causality from FDI to economic growth, from economic growth to FDI, from trade to economic growth and from economic growth to trade in the short run. The results go against the generally accepted idea considering the positive impact of FDI on economic growth to be automatic.

## 3. Methodology and Data Source

This section highlights and describes the econometric methodology and the data that were used to established and analyzed the underlining topic of discussing.

The study employed annual data from 1995-2017 which is sourced from the website of international monetary fund (IMF), Index of Economic Freedom -Heritage Foundation and the world Bank databases. The variables extracted from these databases includes, Gross domestic product, imports, exports, exchange rate, consumer price index (inflation), foreign direct investment, and trade freedom.

The study adopted the autoregressive distributed lag model (ARDL) approach to estimate the short and long run causality of the variables in consideration. This technique is employed due to the fact that the variables had a mixture of I(0) and I(1) properties and perhaps the sample size and number of observations considered is small. This econometric model also makes it flexible to attached different variables with different lag-lengths as they infiltrate the model. This implies ARDL model has a reparameterization approach to co-integration of non-stationary variables and error-correction (EC) processes. The model is demonstrated as;

$$GDP_t = \beta_0 + \beta_1 GDP_{t-1} + \cdots + \beta_Z GDP_{t-Z} + \varphi_O FDI_t + \varphi_1 FDI_{t-1} + \cdots + \varphi_U FDI_{t-U}$$
$$+ \omega_O TOP_t + \omega_1 TOP_{t-1} + \cdots + \omega_J TOP_{t-r} + \gamma_O TRF_t + \gamma_1 TRF_{t-1} + \cdots + \gamma_s TRF_{t-m} + z_O INF_t +$$
$$z_1 INF_{t-1} + \cdots + z_h INF_{t-h} + l_O EXH_t + l_1 EXH_{t-1} + \cdots + l EXH_{t-l} + \varepsilon_t \qquad (1)$$

Equation (1) is adopted to further incorporate the study variables as;

$$\Delta GDP_t = \beta_0 + \Sigma \beta_F \Delta GDP_{t-F} + \Sigma \lambda_j \Delta FDI_{t-j} + \Sigma \psi_k \Delta TOP_{t-k} + \Sigma \pi_x \Delta TRF_{t-x} + \Sigma \phi_g \Delta INF_{t-g} +$$
$$\Sigma \phi_u \Delta EXH_{t-u} + \theta_0 FDI_{t-1} + \theta_1 TOP_{t-1} + \theta_2 TRF_{t-1} + \theta_3 INF_{t-1} + \theta_4 EXH_{t-1} + \mu_t \qquad (2)$$

Equation (2) can further be stretched as follows;

$$\Delta GDP_t = \beta_0 + \sum_{f=1}^{p} \beta_F \Delta GDP_{t-F} + \sum_{j=1}^{q} \lambda_j \Delta FDI_{t-j} + \sum_{k=1}^{m} \psi_k \Delta TOP_{t-k} + \sum_{x=1}^{\omega} f_x \Delta TRF_{t-x} +$$
$$\sum_{g=1}^{n} \phi_g \Delta INF_{t-g} + \sum_{u=1}^{r} \pi_u \Delta EXH_{t-u} + \theta_0 GDP_{t-1} + \theta_1 FDI_{t-1} + \theta_2 TOP_{t-1} + \theta_3 TRF_{t-1} +$$
$$\theta_4 INF_{t-1} + \theta_5 EXH_{t-1} + \mu_t \qquad (3)$$

Where:
The regressand
$GDP_t$ = Gross domestic product at time t
The regressors are;
$FDI_t$ = Foreign direct investment at time t
$TOP_t$ = Trade openness at time t (total exports + imports/GDP)
$TRF_t$ = Trade freedom at time t
$INF_t$ = Inflation rate at time t
$EXH_t$ = Exchange rate at time t
Where $\beta_0$ is an intercept, $\beta_F$, $\lambda_j$, $\psi_k, \pi_x$, $\phi_g$ and $\phi_k$ are short run dynamics (coefficients), $\theta_0$, $\theta_1$, $\theta_2$, $\theta_3$, and $\theta_4$ are long run coefficients, and $\Delta$, $\varepsilon_t$ & $\mu_t$ represents first order differences and error term respectively.

After estimating equation (3), an F test on the null hypothesis $H_0$: $\theta_0 = \theta_1 = \theta_2 = \theta_3 = \theta_4 = 0$ is carried out to ascertain whether the variables $GDP_{t-1}$, $FDI_{t-1}$, $TOP_{t-1}$ $TRF_{t-1}$ $INF_{t-1}$ $EXH_{t-1}$ which have long run coefficients are statistically significant or not. If the regressors considered are statistically significant and co-integrated then an unrestricted error correction model (ECM) is used to estimate the given causality among them.

Journal of Economics and Sustainable Development
www.iiste.org
ISSN 2222-1700 (Paper) ISSN 2222-2855 (Online)
Vol.9, No.20, 2018
IISTE

### 3.1 Hypothesis

**Hypothesis 1:** $\frac{\partial GDPt}{\partial FDIt} > 0$ Foreign direct investment refers to resources foreign investors are ready to commit or invest in their companies or subsidiaries. It is a kind of an ally linking a parent company and its foreign subsidiary. The study expects foreign direct investment to have a positive relationship with economic growth (proxied as GDP).

**Hypothesis 2:** $\frac{\partial GDPt}{\partial TOPt} > 0$ Trade openness is as a result of globalization and trade liberalization. Trade openness refers to the outward or inward orientation of a given country economy. Outward orientation refers to countries that take significant advantage of opportunities to trade with other countries whilst inward orientation refers to economies that are unable to take advantage of the opportunities to trade with other countries. Trade openness brings great economic benefits such as transfer of skills and technology, increased in labour and total factor productivity etc. We expect trade openness to have a positive and a significant effect on economic growth.

**Hypothesis 3:** $\frac{\partial GDPt}{\partial TRFt} > 0$ The extent to which governments allows its economics agents to interact without hinderance as buyers or sellers in the international trade marketplace is quite vital and quintessential for its economic growth. The index of economic freedom emphasizes the need for trade freedom, stipulating that trade restrictions may put advance technological products and service beyond the reach of entrepreneur's and developers hence limiting their overall productivity and development. We expect trade freedom to exhibits a positive relationship with economic growth.

**Hypothesis 4:** $\frac{\partial GDPt}{\partial INFt} < 0$ Perpetually high inflation is an enemy to economic stability and weakens the value of money. The transmission mechanism of this effect is the retirement of economic growth. High Inflation rate possesses negative relationship with economic growth.

**Hypothesis 5:** $\frac{\partial GDPt}{\partial EXHt} <> 0$ When the coefficient of exchange rate is negative it implies depreciation, and appreciation if otherwise. A depreciation of the CFA Franc against USA or other currencies will weaken its value. Appreciation of the CFA Franc is quite a good measure of economic stability and perhaps promotes economic growth.

### 4.0 Results and Discussion

#### 4.1 Unit Root Test (ADF) of Stationarity and non-stationarity of variables

One major problem of time series/annual data is that the variables are a mixture of stationary and non-stationary variables and may results to spurious estimates if OLS is used for the analysis. In this direction, the Augmented Dickey Fuller (ADF) method is applied to test for stationarity of the variables (unit roots test). The results portrayed in table 4.1 below shows that all the variables except gross domestic product are stationary i.e I(0), at first difference, and all except inflation rate are non-stationary i.e I(1) at level. The autoregressive distributed lag model (ARDL) was therefore suitable in this case, since the variables are integrated at different magnitudes. The (ARDL) and error correlation model (ECM) was employed to estimate the short and long run causality between the variables since they were co-integrated.

**Table 4.1 Unit Root Test (ADF)**

| Variables | Z(t) | ADF Test statistics | 1% critical | 5% critical | 10% critical | MacKinnon (1996) one-sided p-values approx. for Z(t) | Decisions |
|---|---|---|---|---|---|---|---|
| $GDP_t$ | Z(t) | 1.957 | -3.808 | -3.020 | -2.650 | 0.9996 | Unit roots |
| $\Delta GDP_t$ | Z(t) | -1.557 | -3.831 | -3.029 | -2.655 | 0.4842 | Unit roots |
| $FDI_t$ | Z(t) | 0.060 | -3.857 | -3.040 | -2.660 | 0.9528 | Unit roots |
| $\Delta FDIt$ | Z(t) | -4.637 | -3.886 | -3.052 | -2.666 | 0.0023 | No Unit roots |
| $TOP_t$ | Z(t) | 3.588 | -3.769 | -3.004 | -2.642 | 1.0000 | Unit roots |
| $\Delta TOP_t$ | Z(t) | -4.507 | -3.588 | -2.986 | -2.632 | 0.0018 | No Unit roots |
| $TRF_t$ | Z(t) | -2.734 | -3.769 | -3.004 | -2.642 | 0.0842 | Unit roots |
| $\Delta TRF_t$ | Z(t) | -5.847 | -3.788 | -3.012 | -2.646 | 0.0001 | No Unit roots |
| $INF_t$ | Z(t) | -3.977 | -4.533 | -3.674 | -3.277 | 0.0286 | No Unit roots |
| $\Delta INF_t$ | Z(t) | -4.700 | -4.498 | -3.658 | -3.268 | 0.0067 | No Unit roots |
| $EXHI_t$ | Z(t) | -1.623 | -4.441 | -3.632 | -3.254 | O.7501 | Unit roots |
| $\Delta EXH_t$ | Z(t) | -4.529 | -4.468 | -3.645 | -3.261 | 0.0088 | No Unit roots |

Note; the absolute values of Z(t) of the ADF test statistics is compared with the absolute critical values at 5% significance level. The null hypothesis is rejected if Z(t)>5% critical value.

#### 4.2 Test for co-integration

In other to ascertain whether the variables are co-integrated, the ARDL bound test was carried out. The ARDL

bound test of co-integration results reveals in table 4.2 below that, the test statistic; F-statistics has a higher value (5.44) than the upper bound critical value, 4.68 (at 1% significance level) hence we have sufficient reasons to reject the null hypothesis of no long-run relationship at 1% significance level and perhaps conclude that, there exist cointegration among the studied variables.

**Table 4.2 ARDL Bound Test for Co-integration**

| Variables | F-statistic | Cointegration |
|---|---|---|
| f(GDP,FDI,TOP,TRF,INF,EXH) | 5.44*** | Cointegration |
| **Critical Value Bounds (significance)** | **Lower Bound (I0)** | **Upper Bound (I1)** |
| 10% | 2.26 | 3.35 |
| 5% | 2.62 | 3.79 |
| 2.5% | 2.96 | 4.18 |
| 1% | 3.41 | 4.68 |

**4.3 Stability and Residual diagnostic test**

Table 4.3 below shows the results for the Breusch-Godfrey test for Heteroskedasticity (residual diagnostic test). Since the p-value is greater than 5% significance level (0.4982>5%), we fail to reject the null hypothesis and conclude that, the data is free from Heteroskedasticity.

In other to check for outliers, stability in each of the variables, and whether the model is possibly mis-specified (for example, to check for linearity) the dependent variable was set us a leverage against the regressors (independent variables) using leverage plots, from figure 4.1 most of the residuals apparently moves along the regression line as expected. We are therefore confident that the model is not entirely mis-specified hence stable. Figure 4.2 also shows the CUSUM tests and CUSUM of squares test of stability for the variables employed in the study. The figure reveals some structural breaks in the study parameters since they do not line entirely within the 5% significance line. Though, they are some deviations, it's worth noting that the model is quite stable.
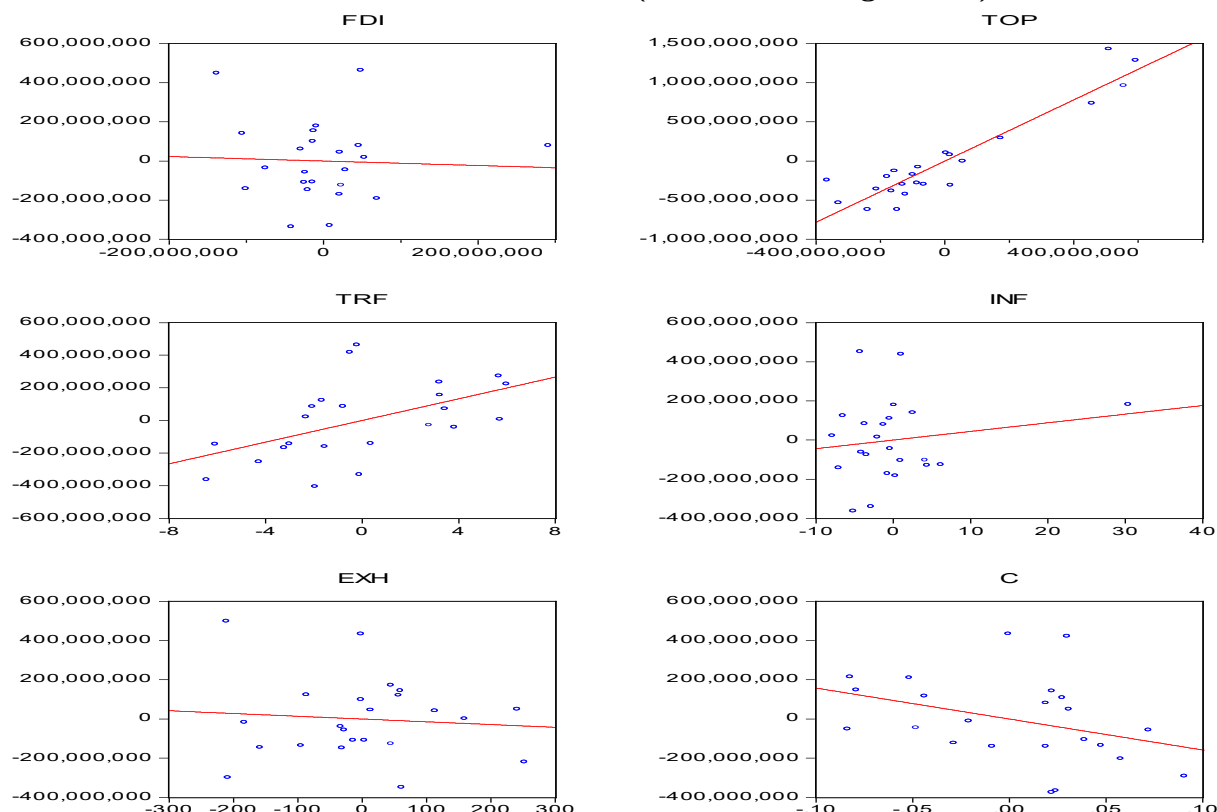
**Table 4.3 Heteroskedasticity Test: Breusch-Pagan-Godfrey**

| | |
|---|---|
| F-statistic | 0.681495 |
| Obs*R-squared | 15.36390 |
| Prob.F(16, 4) | 0.7417 |
| Prob.Chi-Square(16) | 0.4982 |
| Prob.Chi-Square(16) | 1.0000 |
| Scaled Explained SS | 0.470689 |

**Figures 4.1 Leverage plots**

**Figures 4.2** CUSUM Tests and CUSUM of Squares Test



GDP vs Variables (Partialled on Regressors)

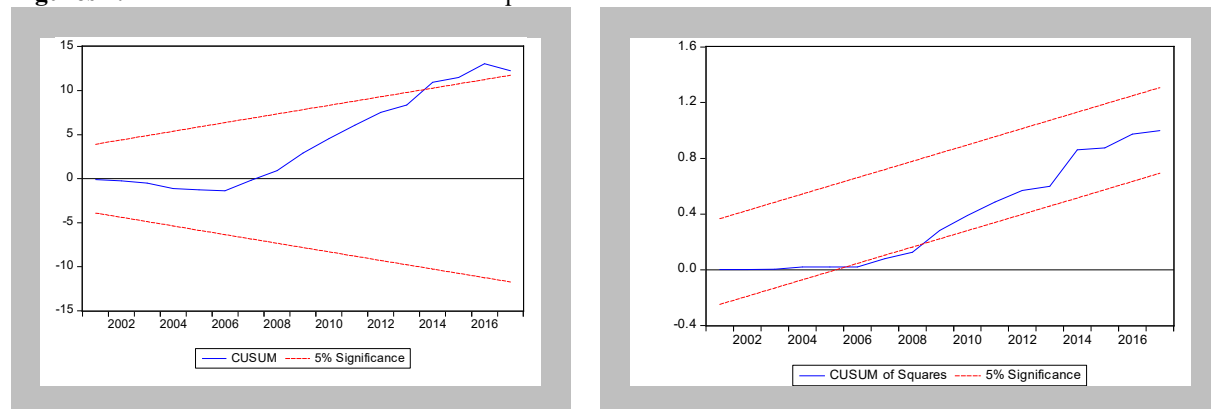**Figures 4.2** CUSUM Tests and CUSUM of Squares Test



**Table 4.4 OLS Estimates**

Dependent variable: LNGDP

**Table 4.4 OLS Estimates**

Dependent variable: LNGDP

| Variables | Coefficients | Standard Error | t-statistics | P-value |
|-----------|-------------|----------------|--------------|---------|
| LNFDI | 0.004547 | 0.011785 | 0.385854 | 0.7044 |
| LNTOP | 0.695437 | 0.078715 | 8.834889 | 0.0000 |
| LNTRF | 1.416550 | 0.672079 | 2.107715 | 0.0502 |
| LNINF | 0.021910 | 0.030169 | 0.726250 | 0.4776 |
| LNEXH | -0.085162 | 0.140756 | -0.605037 | 0.5531 |
| C | 1.750628 | 3.964468 | 0.441580 | 0.6644 |

$R^2$= 0.839288, adjusted $R^2$ = 0. 792019, F-Statistics = 17.75580, Prob (F-Statistics) = 0.000003, N=23,

LN= Natural log

**Table 4.5 ARDL Estimates**

Dependent variable; GDP

| Variables | Coefficients | Standard Error | t-statistics | P-value |
|---|---|---|---|---|
| $GDP_{t-2}$ | 0.625635 | 0.132056 | 4.737634 | 0.0091 |
| $FDI_{t-1}$ | -1.552022 | 0.249604 | -6.217938 | 0.0034 |
| $TOP_{t-1}$ | 2.196167 | 0.486809 | 4.511357 | 0.0107 |
| $TRF_{t-1}$ | 23237163.. | 5704314.. | 4.073612 | 0.0152 |
| $INF_{t-1}$ | -28588718... | 7367368.. | -3.880452 | 0.0178 |
| $EXH_{t-1}$ | -4347051... | 679755.9 | -6.395017 | 0.0031 |
| C | 4.96E+09 | 9.60E+08 | 5.167263 | 0.0067 |

$R^2$= 0.999279, adjusted $R^2$= 0. 996379, F-Statistics = 346.7103, Prob (F-Statistics) = 0.000019, N=23

**Table 4.6 Short Run Coefficients**

Dependent Variable ($GDP_t$)

| Variables | Coefficients | Standard Error | t-statistics | P-value |
|---|---|---|---|---|
| $\Delta FDI_{T-1}$ | 0.950953 | 0.331704 | 2.866873 | 0.0456* |
| $\Delta TOP_{T-1}$ | 0.630059 | 0.283584 | 2.221775 | 0.0904* |
| $\Delta TRF_{T-1}$ | 0.036263 | 0.014808 | 2.448824 | 0.0705* |
| $\Delta INF_{T-1}$ | -0.038918 | 0.011333 | -3.434066 | 0.0264** |
| $\Delta EXH_{T-1}$ | 0.004390 | 0.001340 | 3.276073 | 0.0306** |
| $EC_{T-1}$ | -0.726698 | 0.292564 | -2.483896 | 0.0679 |

$R^2$= 0.850905, adjusted $R^2$= 0. 807054, F-Statistics = 19.49428, Prob (F-Statistics) = 0.000002, N=23

Asterisk ** and * indicates 5% and 10% significance levels respectively. $\Delta$= First difference

**Table 4.7 Long Run Coefficients**

Dependent Variable ($GDP_t$)

| Variables | Coefficients | Standard Error | t-statistics | P-value |
|---|---|---|---|---|
| $FDI_T$ | 0.003903 | 0.004609 | 0.846808 | 0.4089 |
| $TOP_T$ | 0.546282 | 0.167922 | 3.253200 | 0.0313** |
| $TRF_T$ | -0.089628 | 0.048705 | -1.840248 | 0.1396 |
| $INF_T$ | -0.127347 | 0.062159 | -2.048738 | 0.1098 |
| $EXH_T$ | -0.002888 | 0.001390 | -2.077232 | 0.1064 |
| C | 18.094111 | 7.225403 | 2.504236 | 0.0665 |

## 4.4 Interpretation and discussion

Since OLS regression produces spurious results, especially when the variables are a mixture of stationary and non-stationary, it was therefore advisable to apply ARDL and ECM techniques for the extrapolations of the short and long run causality of the studied parameters. The OLS estimates (table 4.4) reveals that trade openness and trade freedom both affect the Togo's economic growth; the spuriousness is quite staggering. Nevertheless, the Autoregressive distributed lag estimates (table 4.5) reveals an intriguing and fascinating results, displaying that foreign direct investment, trade openness, trade freedom, inflation rate, and exchange rate all affect Togo's economic growth at different significant levels and magnitudes. On these bases, the study investigated the short and long causality and perhaps, the normalized equilibriums that the variables may possess in promoting Togo's economic growth in both the short and long run.

The short run causality was estimated by applying an unrestricted error correction technique. The coefficient of the error correction model (EC-1) is negative and significant at 10% level, this portrays that, the speed of adjustment to equilibrium following short-run shocks is only about 10% of the disequilibrium, caused by previous period shocks, which converges back to the long-run equilibrium. This is tremendously remarkable, as it indicates an overshooting adjustment. Table 4.6 shows the short run estimates. The empirical results reveal that all the variables considered in the short run are significant at different magnitudes. The coefficient of foreign direct investment is positive and significant this implies that a unit increase in foreign direct investment will increase Togo's economic growth by 0.950953 units in the short run. Trade openness also possess positive significant coefficient, implying that a unit increase in the country openness to trade with the rest of the world will increase its economic growth by 0.630059 units. Trade freedom is the extent to which sellers and buyers of a country are able to interact, sell, and buy in the international marketplace without any hindrances. Trade freedom is significant and increases Togo's economic growth by 0.036263 units for every one-unit improvement in Togo's trade freedom. Inflation were also found to exhibits negative effects on economic growth. Inflation cause injuries to economic stability and growth, in this study, it negatively affects Togo's economic growth by 0.038918 units, for every one unit increase in inflation rate. Nevertheless, the coefficient of exchange rate is positive indicating an appreciation of the Togo's CFA franc, this implies that when the CFA franc appreciates in terms of the dollar or other trading currency in the foreign exchange markets, it will go a long way to boost economic growth and withholds the

economic fundamentals at a stable peace. The study however, found that in the long run only trade openness affects Togo's economic growth as its exhibits a positive coefficient of 0.546282 (see table 4.7).

It's worth noting that all the empirical results are in line and confirmation with the study preproposal hypothesis and expectations.

The findings of this studies are in line with previous empirical studies. For instance, Ofori D. and Asumadu G. (2017) concluded that trade and FDI inflows could lead to the economic growth of Ghana in their paper the effects of FDI inflows and trade in the economic development of Ghana. The empirical results of Ali N. and Xialing L. (2017) studies are also in line with this study. Their studies confirm that, there is a positive relationship among international trade, foreign direct investment and economic growth in Pakistan's economic perspective. Other studies that are in line with this study includes Nath H. K. (2009), Azman-Saini W. N. W., Baharumsha, A. Z. and Law S. H. (2010) and Belloumi M. (2014).

## 5.0 Conclusion Remarks

This study investigated the relationship between International trade, foreign direct investment and Economic growth in Togo's economic perspective. The OLS results seems apparently spurious largely because, after applying the ARDL and ECM models the variables that were insignificant in the OLS estimates exhibits a strong and significant robustness towards economic growth in the studied area. The empirical results further reveal that in the short run Togo's economic growth can be boosted and revitalized through FDI, trade freedom, trade openness, and exchange rate appreciation, however, in the long run, only trade openness promote economic growth. Foreign direct investment and trade can be seen as a vehicle for Togo's economic development. FDI by its self is seen as an economic restorative and stimulator because it involves the transfer of capital, technology, kill labour, creating jobs and establishing competitive and comparative advantage in Tgogo's economic progress in the international front.

## References

1. Agrawal, G. (2015). Foreign direct investment and economic growth in BRICS economies: A panel data analysis. Journal of Economics, Business and Management, 3(4), 421-424.
2. Ali, N., & Xialing, L. (2017). Foreign Direct Investment, International Trade and Economic Growth in Pakistan's Economic Perspective. American Journal of Economics, 7(5), 211-215.
3. Antwi, S., Mills, E. F. E. A., Mills, G. A., & Zhao, X. (2013). Impact of foreign direct investment on economic growth: Empirical evidence from Ghana. International Journal of Academic Research in Accounting, Finance and Management Sciences, 3(1), 18-25.
4. Arısoy, İ. (2012). The impact of foreign direct investment on total factor productivity and economic growth in turkey. The Journal of Developing Areas, 46(1), 17-29. Retrieved from http://www.jstor.org/stable/23215420
5. Azman-Saini, W. N. W., Baharumshah, A. Z., & Law, S. H. (2010). Foreign direct investment, economic freedom and economic growth: International evidence. Economic Modelling, 27(5), 1079-1089.
6. Belloumi, M. (2014). The relationship between trade, FDI and economic growth in Tunisia: An application of the autoregressive distributed lag model. Economic systems, 38(2), 269-287.
7. Chen, C. (2018). The liberalization of FDI policies and the impacts of FDI on China's economic development. In Garnaut R., Song L., & Fang C. (Eds.), China's 40 Years of Reform and Development: 1978–2018 (pp. 595-618). Acton ACT, Australia: ANU Press. Retrieved from http://www.jstor.org/stable/j.ctv5cgbnk.37
8. guru-gharana, k. (2012). econometric investigation of relationships among export, fdi and growth in india: an application of toda-yamamoto-dolado-lutkephol granger causality test. The Journal of Developing Areas, 46(2), 231-247. Retrieved from http://www.jstor.org/stable/23215372
9. Jamshid Damooei, & Akbar Tavakoli. (2006). The Effects of Foreign Direct Investment and Imports on Economic Growth: A Comparative Analysis of Thailand and the Philippines (1970-1998). The Journal of Developing Areas, 39(2), 79-100. Retrieved from http://www.jstor.org/stable/4193005
10. Li, X., & Liu, X. (2005). Foreign direct investment and economic growth: an increasingly endogenous relationship. World development, 33(3), 393-407.
11. Makki, S., & Somwaru, A. (2004). Impact of Foreign Direct Investment and Trade on Economic Growth: Evidence from Developing Countries. American Journal of Agricultural Economics, 86(3), 795-801.
12. Nath, H. K. (2009). Trade, foreign direct investment, and growth: Evidence from transition economies. Comparative Economic Studies, 51(1), 20-50.
13. Ofori, D., & Asumadu, G. (2017). Foreign Direct Investment, Trade and Economic Growth in Ghana: An Empirical Analysis. International Research Journal of Finance and Economics, (159).
14. Wang, Y. (2010). FDI and productivity growth: The role of inter-industry linkages. The Canadian Journal of Economics / Revue Canadienne D'Economique, 43(4), 1243-1272. Retrieved from http://www.jstor.org/stable/40925276