

Innovations

The Impact of Foreign Financial flows on Economic Growth: an Empirical Analysis with Reference to East African Countries

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Abstract

The main objective of this research was to examine the impact of foreign financial flows and real exchange rate (control variable) on economic growth of East African countries. Foreign financial flows are important vehicles for economic development as far as the developing nations are concerned. They have a key effect on country's economic growth by increasing the efficiency of resource allocation, financing current account imbalances, upgrading currency stock, encouraging export, enhancing productivity and facilitating the transfer of innovative ideas & technology. To determine the effect, the researcher adopted explanatory research design, census-sampling method, and correlation & regression data analyses. In addition, huasman and diagnostic tests were conducted to select an appropriate model. The researcher used secondary panel data, collected from World Bank development indicator website, for the period of 2013-2020. The dependent variable used as a proxy to measure economic growth is log of real GDP per capita whereas explanatory variables representing financial inflows are FDI, Foreign AID (i.e. Official Development Assistant), remittance and sovereign debt. Moreover, real exchange rate was used as a control variable. From the study, the researcher found that inflows of foreign direct investment and sovereign debt had positive and progressive effect on economic growth whereas foreign aid, remittance and real exchange rate had negative and significant impact on economic growth and development of East African countries. The researcher also recommended that governments of East African countries and policy makers should adopt appropriate policy framework, efficient financial development systems, strong management structure, and monitor & control the process to make sure that resources are utilized efficiently on planned and productive investments.

Key Terms: 1.East Africa, 2.Economic Growth, 3.Financial Flows, 4.Foreign Direct Investment, 5.Foreign Aid, 6.GDP per Capita, 7.Real Exchange Rate, 8.Remittance, 9.Sovereign Debt

1. Introduction

1.1 Background of the Study

East Africa is the fastest growing region in the continent with a growth rate of 5.3 % in 2016, which is greater than the average growth rate of Africa (2.2%) (Import Bank of India, 2017). The most prominent countries are Rwanda, Tanzania, Uganda, Kenya and Ethiopia. However, part of them recently scored very poor growth and the region suffered periods of severe civil conflict and economic instability. Since then, their real GDP and

per capita income remain low and the region has demonstrated commitment to strong policies. Most of them in the region have ambitious plans to transform their economies to middle-income levels in the next decade. However, the recent growth path, therefore, will not be enough to achieve middle-income status and substantial poverty reduction by the end of the decade. To achieve this objective, the countries should upgrade economic growth by increasing investment. On the other hand, increasing investment depends on increased domestic saving which is not sufficiently available in most of these countries. Therefore, to fill the gap, foreign sources of finance are required.

Foreign Financial flows play crucial role in economic growth and development of emerging countries. Its inflows have recently increased considerably to developing countries in African continent. Apart from foreign sources, other potential sources such as income from export, government revenue from taxation, saving from domestic investment efficiency etc) are limited to finance development. In many east African countries, export earnings are highly dependent on agricultural commodity therefore; its price adversely affects the current account and hampers development plans. Low tax base due to large informal sector and low level of domestic saving with inefficient financial system, in these countries, also limit domestic resource mobilization capacity and increasing revenue from taxation. This created saving gap and then increased the demand for foreign finance to increase the stock of capital for investment & development.

In the worldwide financial system, overseas financial flows have a chief role. It channel financial savings to the nations and areas of the sector wherein it may be maximum productive in proper times. While they have, the ability to disrupt domestic financial structure of the maximum inclined nations and consequently represent a key component affecting global financial stability in disaster times. Foreign financial flows additionally constitute one of the nook stones of the contemporary “dilemmas” and “trilemmas” that hyperlink financial policy, exchange rate and the capital account (Rey, 2013). Stiglitz & Andrew (1981), consider it as an engine for globalization and the catalyst for economic development for emerging economies. It is important for east African countries, with high poverty levels and low domestic capacity to save, for a number of reasons. For one, such flows are increasingly the main source of external financing for many countries in the region. It assists these countries with economic improvement by furnishing them with necessary capital and technology. In addition, it helps to fill the resource gap where domestic savings are insufficient to finance investment. That means, it enables the recipient country to utilize the resource in investment and consumption more than it produces when the marginal productivity of capital within the recipient country is higher than the country having surplus capital in the globe. Moreover, It facilitate the achievement of national objectives including millennium development goals (MDGs) and macroeconomic stability since it affect various macroeconomic variables such as foreign exchange rates, foreign currency reserves, interest rates and domestic savings & investments. Foreign financial flows include foreign direct investment (FDI), foreign aid, foreign portfolio investment, remittance, foreign trade/export earning and sovereign debt.

Foreign direct investment (FDI) has considered as an important factor in achieving sustainable growth & development of the country. It is an investment (green field investments or cross border mergers & acquisitions) acquiring ten or more percent of voting stock or management interest in a company that operates in various sectors. In developing countries like eastern Africa, FDI can mitigate the saving-investment imbalance and provides technology used for the production of goods and services. This influence the condition of employment, volume of production, price of goods and services, level of income, balance of payments, the general welfare of the recipient country and serves as one of the vital sources of economic growth (Todaro and Smith, 2006). A cave (1996) observes that the rationale for increased efforts to attract more FDI to host economies stems from the belief that FDI has several positive effects. Among these are: foreign firms bring in superior scientific or managerial technology, foreign investment steers up competition

in the host economy, it results in increased domestic investment that gives advantage in terms of export market, and aid in bridging a host country's foreign exchange and saving gap, (Brooks et al., 2003). Even though there is positive impact, FDI might negatively hurt domestic economy and reduces economic growth rates. This is true in countries with significant political risks and therefore, an extreme conflict. Conflict creates uncertainty in planning and negatively affects the economy via disruptions of production, corruption, and transportation (Chen, 2017). Nevertheless, FDI reduce conflict by decreasing unemployment opportunities, which is the factor for young men to be recruit by warlords.

Foreign aid, also known as overseas development assistance (ODA), is the provision of resources from one country or government to another. According to Development Assistance Committee, foreign aid is defined as an ODA provided by government to promote the economic development and welfare of developing countries. Accordingly, the word "resources" include financial aid, grants, and loans and excludes Loans and credits for military purposes. It mainly intends to promote economic development in host countries and flows through bilateral or multilateral channels (OECD, 2010 & 2012). Bilateral aid represents financial flow from one country directly to another whereas multilateral aids indicate aid flows from multiple countries and other entities such as EU, World Bank or International Development Association, Global Fund etc. Nearly all list developed countries (LDCs) including eastern Africa, irrespective of fragility or not, remain strongly dependent on Official development assistance (ODA) flows. For these countries, ODA flows are the bulk of external financial resources, accounting for over 70% of all external flows.

International migration affects the economic outcomes of both the migrants themselves and their families left behind. It occurs when people migrate from their original countries and sending back financial transfer to their families at home countries. This financial transfer made to host country is known as, remittance. Remittance is a financial (or in-kind) transfer made by migrants to friends and relatives back in communities of origin. Recently low and middle-income countries received large amount in comparison to the size of their economy. It reached a record greater than USD 529 billion in 2018, (World Bank, 2019a). East African countries also received USD 8.9 billion in 2018 and USD 9.6 billion in 2020, respectively. These indicate the transfer of remittance have progressive change and expected to increase in the near future. In standard growth accounting framework, remittance affects economic growth by increasing technological progress, expressed by factor productivity. This can occur if remittance changes the quality and efficiency of financial system with reference to capital allocation and financial intermediation. On the other hand, it can also affect economic growth negatively by affecting real exchange rate (i.e. Dutch-disease effects) assuming that, recipient increases consumption with the given price, increasing remittance inflows rises price for goods and services. This in turn leads resources towards non-tradable products and increase real exchange rate, which lower competitiveness in global markets, (Joshua Yindenaba A. et. al., 2021).

Another important capital inflow used to finance expenditure by government of developing nations is Sovereign debt. Given the small tax base and inadequate revenue characteristic of developing countries including East Africa, the main source of finances in the development and expansion of infrastructure is debt secured both domestically and externally. Since the supply of money is fixed, domestic borrowing by the government may be at the cost of private investment since it may withdraw from the productive uses, hence; various governments give more emphasis to external debt to make investment in national development programs. Reliance on external borrowing is not only rationalized on the grounds that excessive domestic borrowing can lead to financial instability and crowd out the private sector (Panizza et al., 2010) but also, as argued by Todaro and Smith (2006), developing countries in their early stages of development need to borrow externally because of inadequate domestic capital for investment. It is a complement to domestic savings and investment, and thus promotes growth (Eaton, 1993). On the other hand, Krugman (1988),

asserts that debt servicing obligations cause distortions in an economy and hence discourages investment and economic growth.

The concept of real exchange rate in promoting economic growth has a great attention from academic and policy arena. Financial economists for a long period put emphasize on the relation between exchange rates and economic growth. This variable, taken by the researcher as extraneous, has also significant effect on economic growth of developing countries. Therefore, the researcher would be interested in examining the effect of foreign capital flows (including real exchange rate), including real exchange rate, on economic growth and its trend in eastern Africa, which categorized under emerging countries in sub Saharan region.

1.2 Statement of the Problem

Foreign financial flows are one of the major factors influencing Economic growth and development of emerging countries. It contributes to the economy of developing countries in various ways. It fills the gap between saving and investment; helps to enhance technical productivity; contributes to reduce unemployment and, therefore; increases national output in general and household income in particular. These inspired the need for foreign financial inflows in Africa given its high level of poverty and low level of domestic saving. To attract foreign capital, which satisfy the need, African countries (particularly East Africa) have changed their financial policies, systems and structures. Despite these efforts, they are working to differentiate which types of foreign finance have significant contribution to growth, which method is best to attract foreign finance and where to deploy foreign capital, (Aizenman, 2013).

The studies conducted in different countries reveal that foreign financial flows have controversial effects on economic growth of developing countries. Some researchers (like Imen Mohamed S. 2021; Driffield and Jones, 2013; Salahudin, 2013; Oche et. al.,; 2016 etc.), found that foreign financial flows have positive effect on economic growth of the country while others found negative results, (Konings,2001; Phiri Maurice W. 2017; Tassew and Rao, 2016; and Reisen & Soto (2001). Additionally, some others, in their finding, revealed foreign capital have no effect (neutral) on economic growth of the countries. These indicate that it was very difficult, even impossible; to generalize the result on the basics of their findings or the results were not conclusive.

Even though more studies have conducted in Africa, they had focus on individual sources of foreign finances (Thilanka et. al. 2018; Akomolafe et. al., 2015; Mekasha & Tarp, 2011; Arndt et. al., 2010; Bhatara, 2005; and Salahudin, 2013). Less has been done in East African region and those done in the region are subjected to limitation in scope (did not include the whole countries and types of foreign capitals) and methodology (Getish Birhane B. & Bhupendra K., 2020 and Mwangi & Mwenda, 2015). Currently, countries like Ethiopia have designed liberal policies on foreign direct investment, remittances through Diaspora bond etc. in the region. Therefore, the researcher was interested to examine the effect of foreign financial flows (namely FDI, Foreign Aid, Remittance and Sovereign Debt) and related exchange rate on economic growth of the whole East African countries except Eretria, due to lack of data on World Bank Development Indicators website.

1.3 Objective of the Study

The general objective of the study was to examine the effect of foreign financial flows on economic development of emerging countries in east Africa.

The specific objectives of the study were-

- To identify the link between financial inflows and economic growth of East Africa
- To determine the effect of financial flows on real GDP per capita of East Africa
- To measure the effect of real exchange rate on real GDP per capita of East Africa and
- To make conclusion and recommendations based on the results of the study.

1.4 Research Hypothesis

H01: There is significant positive relationship between financial flows and economic growth

H02: There is significant negative link between real exchange rate and real GDP per Capita.

2. Empirical Review

There are different empirical literatures that provide Controversial arguments in the effect of foreign financial flows (such as FDI, foreign aid, remittance and sovereign debt) on economic growth of developing countries. These views are as follows: Imen Mohamed S. (2021), on his study conducted in four North African countries, and Driffield and Jones (2013) stated that FDI has positive effect on economic growth. Koojaro enprasit (2012) in his study of the impact of FDI on economic growth in found that FDI has strong and positive impact on Korea's economic growth. On the other hand, Carkovic and Levine (2002), and Konings (2001), through their study on the impact of FDI on economic growth, have showed that FDI does not bring a strong and positive impact on economic growth. Similarly, Schoors et al. (2002) argue that additional FDI inflows in to the company may push out other firms, without FDI, from the market. Hence, FDI's negative influence could weaken the competitive position of local producers and could result in structural unemployment. Zhang (2001) stated that the contribution of FDI to economic growth depends on the economic and social condition or environmental quality of the recipient country.

The research performed via way of means of Driffield and Jones (2013), Mekasha & Tarp, (2011), Arndt et. al., (2010) and Bhatarai, (2005), additionally suggest that foreign aid has positive and significant effect on economic growth of growing nations. Some others such as Durbary et. al., (1998) and Burnside and Dollar (2000) found that aid has positive impact on growth but effectiveness is conditional to good policies, environmental circumstance, geographical location and level of aid allocation. Their findings support the Harrod-Domar theoretical view, which suggests that foreign aid accelerates domestic saving thereafter growth. In contrast, various researchers like Griffin and Enos (1970), Mosley (1980), Phiri Maurice W. (2017), Morrissey (2006), Weiskopff (1972), and Nyoni (1998) examined the aid and growth relationship and argued that there is a significant negative relationship between aid and growth.

Getish Birhane B. & Bhupendra K., (2020), Imen Mohamed S. (2021), Mwangi & Mwenda (2015) on their study conducted in East Africa, Kenya and North African countries respectively, and Salahudin (2013) argued that remittance has positive effect on economic growth. In addition, Driffield and Jones (2013), on the study of foreign capital flows and economic growth in developing countries, concluded that all foreign capital flows including remittances have a positive and significant impact on growth. These studies were consistent with classical and social network theories. Whereas, another studies undertaken by Tassew and Rao (2016), to assess the impact of remittances on Ethiopian economic growth over the period 1981 – 2012, revealed that there is a short run significant impact of remittances on economic growth but it affects the economy negatively in the long run. Senbeta (2012) in his study asserted that remittances have contradictory effects on the two sources of growth: capital accumulation and productivity growth. These findings suggest that while remittances enhance investment and contribute to physical capital accumulation, lack of efficiency enhancing effect on TFP growth would make the net effect on economic growth ambiguous. Their findings were also consistent with Neo-classical, Structuralist and Neo-Marxist theories as it argue against remittance positive contribution.

Studies conducted by Oche et. al., (2016), Thilanka et. al. (2018) and Akomolafe et. al. (2015) in South Africa, Nigeria and Sri Lanka respectively, indicate that public debt has positive effect on economic growth through private investment. On the other hand, Aizenman et al. (2013), Reisen & Soto (2001), and Driffield and Jones

(2013) studied the relationship between foreign capital flows and economic growth. They found that debt had negative effect on economic growth during the crisis period and neutral before the 2008 financial crisis. However, some other researchers such as Huang et. al., (2016) and Shah M.H. & Pervin, S. (2012) found inconclusive result on their studies.

3. Methodology

3.1 Materials and Methods

The researcher adopted explanatory research design that shows the cause and effect relationship between dependent & independent variables on quantitative approach. It helped the researcher to measure values of explanatory variables' effect on explained one. In addition, census-sampling method has employed to include the whole target population in to the study (all East African countries excluding Eritrea due to data insufficiency on World Bank website). The researcher applied analysis methods, such as correlation and regression, to analysis secondary panel data collected from World Bank website by using the STATA software. The researcher also used Generalized List Squire (GLS) regression model to the study for the period of (2013-2020).

3.2 Model Specification

The researcher adopted linear regression model to examine the link between foreign financial flows and economic growth in East African countries. Dependent variable used to measure economic growth is natural log of real GDP per capita (lnRGDP) whereas explanatory variables representing financial flows are foreign direct investment inflows per GDP constant (FDI), foreign aid per GNP constant (FAID), remittance per GDP constant (REMIT), debt per GDP constant (DEBT), and control variable is real exchange rate (REXR). Therefore, in this study, the generalized list squire (GLS) approach was used to test the relationship between financial flows and economic growth in East Africa.

General Equation for the given variables:

$$y_{it} = \beta_0 + \beta_1 x_{it} + u_t \dots\dots (3.2.1)$$

y represents the explained variable, x represents explanatory variables, β_0 represents the constant (omitted variable coefficient), β_1 represent coefficients with explanatory variables, u is the error term, i represents countries under the study and t represents time or period of the study. Based on the above equation, the GLS regression model would be presented as follows:

$$\ln\text{RGDP}_{it} = \alpha_0 + \alpha_1\text{FDI}_{it} + \alpha_2\text{FAID}_{it} + \alpha_3\text{REMIT}_{it} + \alpha_4\text{DEBT}_{it} + \alpha_5\text{REXR}_{it} + e_{it} \dots\dots(3.2.2)$$

4. Result and Discussion of Findings

4.1 Correlation Analysis

Correlation analysis presents the relationship between dependent and independent variables included in the study conducted for East African countries for the period of 2013-2020. It is a number between +1 & -1 that reflects the magnitude and direction of explanatory variables on explained one as strong, weak, positive and negative. The higher values, which are closer to +1, indicate the existence of stronger relationship whereas the lower values indicate weaker relationship. On the other hand, if the correlation coefficient is zero, there is no evidence of any relationship. The table below presents the result of Pearson correlation coefficient matrix.

Table no. 4.1 shows that, foreign aid (FAID), remittance (REMIT) and real exchange rate (REXR) were negatively correlated with real GDP per capita with the coefficient values of -0.6482, -0.3104 and -0.3865 respectively. These values indicate that when the coefficient value for foreign aid, remittance and real exchange rate increase, the value for real GDP per capita decreases in opposite direction and vice versa.

Table 4.1: Pearson Correlation Coefficient Matrix

| VARIABLES | lnRGDP | FDI | FAID | REMIT | DEBT | REXR |
|-----------|-----------|---------|---------|---------|---------|--------|
| LRGDPPC | 1.0000 | | | | | |
| FDI | 0.3163** | 1.0000 | | | | |
| FAID | -0.6482** | -0.0461 | 1.0000 | | | |
| REMIT | -0.3104** | -0.0242 | 0.5726 | 1.0000 | | |
| DEBT | 0.2767** | 0.0972 | -0.0182 | 0.1827 | 1.0000 | |
| REXR | -0.3865** | -0.1940 | 0.0029 | -0.1566 | -0.3543 | 1.0000 |

**Indicates one tailed test ** indicates two tailed test Source: The Researcher's own Computation (2022) by using STATA software*

In addition, they had strongly significant influence on log of real GDP per capital of east African countries with 1 percent significant level. On the other hand, foreign direct investment (FDI) and debt had positive coefficient values of 0.3163 and 0.2767 respectively. These values clearly indicate that there is strong relationship and, real GDP per capita increases when FDI and debt increase in the same direction with significant level of one percent.

4.2 Model Selection

To select the right model for the study, from fixed and random effect models, the researcher adopted huasman test.

Table 2.2: Hausman test result for model selection

| Explanatory Variables | Coefficients | | | | | | |
|-----------------------|--------------|--------|------------|--------|--------------------|-------|-----------|
| | (b) | | (B) | | (b-B) | | (V_b-V_B) |
| | Random (RE) | Effect | Fixed (FE) | Effect | Difference (RE-FE) | (RE-) | S.E. |
| FDI | -0.0325591 | | -0.0380874 | | 0.0055283 | | 0.026419 |
| FAID | -0.0014517 | | -0.0012886 | | -0.0001631 | | 0.00034 |
| REMIT | -0.0011451 | | -0.0000219 | | -0.0011232 | | 0.0009515 |
| DEBT | 0.0606309 | | 0.055939 | | 0.004692 | | 0.0081872 |
| REXR | 5.49E-06 | | 0.0000169 | | -0.0000115 | | 8.20E-06 |

Source: The Researcher's own Computation (2022) by using STATA software

b = consistent under Ho and Ha; obtained from xtreg

B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

$$\text{chi2}(5) = (b-B)'[(V_b-V_B)^{-1}](b-B) = 4.14$$

Prob>chi2 = **0.5298**

The test result indicate that random effect model was appropriate than fixed effect model since p-value of hausman test was 52.98 %, which is greater than the standard value of 5%.

4.3 Diagnostic Tests of Random Effect Model

This section presents random effect model tests. Accordingly, the researcher carried out the following diagnostic tests before conducting regression analysis.

Normality Test

The first diagnostic test performed in this study was normality test, which states that the error term has to be normally distributed. The researcher adopted Shapiro-Wilk W test. It signals the existence of normality problem, if the p-value is more than 5%.

Table 4.3:1 Shapiro-Wilk W test for normal data

| Variable | Observation | W | V | Z | Prob.>w |
|-----------|-------------|---------|-------|-------|---------|
| Residuals | 128 | 0.97979 | 2.054 | 1.619 | 0.05001 |

Source: The Researcher's own Computation (2022) by using STATA software

In the above table, Shapiro-wilk w test confirm that p-value for the residuals was 5.0 percent, which is equal to the standard of 5 percent. Thus, the residuals were normally distributed and the researcher failed to reject the null hypotheses.

Multi-co linearity Test

Multi-co linearity reflects the exact linear relationship among explanatory variables. When multi-co exists, it is not possible to estimate coefficients with great precision or accuracy. If the degree of multi-co linearity rises, the regression model estimate of the coefficients become unstable and the standard errors are wildly inflated Gujarati (2004). To detect multi-co linearity effect the researcher used variance inflation factor (VIF) value less than 10 and tolerance (1/VIF) less than 1 as a standard tool for solving this problem. If coefficient values for independent variables are less than the standards, co linearity does not have significant influence on the relationship between independent variables. Otherwise, it does affect the relationship and, therefore, excluded from the regression model.

Table 4.3.2: Variance Inflation Factor (VIF) for Multi-co linearity Test

| Variable | VIF | 1/VIF |
|-----------------|-------------|----------|
| FDI | 1.04 | 0.957699 |
| FAID | 1.53 | 0.653428 |
| REMIT | 1.60 | 0.624508 |
| DEBT | 1.18 | 0.843977 |
| REXR | 1.20 | 0.835175 |
| Mean VIF | 1.31 | |

Source: The Researcher's own Computation (2022) by using STATA software

As shown in the table above, values for variance inflation factor (VIF) and tolerance (1/VIF) for each variable were less than 10 and 1 respectively. This shows the absence of multi-collinearity problem, and hence; satisfied diagnostic test.

Test for heteroskedasticity

In order to test the assumption of homo-skedasticity, which implies that the variance of the errors or unobserved variables should be constant, the researcher applied Breusch-Pagan/Cook-Weisberg test using STATA software.

Table: 4.3.3: Hetero-skedasticity Test

| Breusch-Pagan / Cook-Weisberg test for hetero-skedasticity | | | | |
|--|---------|--|--|--|
| Ho: Constant variance | | | | |
| Variables: fitted values of rgdppc | | | | |
| chi2(1) | = 31.66 | | | |
| Prob > chi2 | = 0.00 | | | |

Source: The Researcher’s own Computation (2022) by using STATA software

The breusch-pagan/cook-Weisberg test, in the table above, shows p-value of 0%, which is lower than significance value of 5% in 95% confidence level. This shows that the null hypothesis has to be rejected since there is hetero-skedasticity problem.

Autocorrelation Test

Durbin-Watson statistics is important to test autocorrelation. It helps to identify either the error terms were seriously correlated or not. Durbin Watson is a test for first order autocorrelation, which tests a relationship between an error and its immediate previous value. If the Durbin Watson d- statistics value is closer to two, there has no evidence for the existence of error correlation with one another. In this table, the Durbin-Watson d-statistic (6, 128) value was 0.5592, which is not close to two. Thus, there is evidence for the existence of autocorrelation.

Table 4.3.4: Durbin-Watson d-statistic for Autocorrelation Test

| Durbin-Watson d-statistic Test |
|--------------------------------|
|--------------------------------|

Durbin-Watson d-statistic (6, 128) = 0.5592

Source: The Researcher’s own Computation (2022) by using STATA software

Based on the test results, the researcher identified that random effect model was unable to fit OLS assumptions of classical linear regression model (CLRM). Therefore, the researcher would adopt other option, which can solve heteroskedasticity and autocorrelation problems. This option is generalized list square (GLS) regression.

4.4 Regression Analysis

This section measures the coefficient values and their level of significance in the study variables.

Economic Growth

Based on the coefficient values in the table below, the regression equation of economic growth & development is measured by log of real GDP per capita, will be written as follows:

$$\ln\text{RGDP}_{it} = 3.2732 + 0.3039\text{FDI}_{it} - 0.0082\text{FAID}_{it} - 0.0202\text{REMIT}_{it} + 0.1430\text{DEBT}_{it} - 0.0002\text{EXR}_{it}$$

Table 4.4: GLS Regression Analysis

| Lngdp | Coef. | Std. Err. | Z | P> Z | [95% Conf. Interval] | |
|-------|------------|-----------|--------|---------|----------------------|-----------|
| fdi | 0.3039334 | 0.1106663 | 2.75 | 0.006** | 0.0870315 | 0.5208354 |
| faid | -0.0081918 | 0.0013986 | -5.86 | 0.000** | -0.0109331 | -0.005450 |
| Remit | -0.0201566 | 0.0026874 | -7.50 | 0.000** | -0.0254238 | -0.014889 |
| Debt | 0.1429915 | 0.0263092 | 5.44 | 0.000** | -0.0914263 | 0.1945567 |
| rexr | -0.0002203 | 0.0000237 | -9.28 | 0.000** | -0.0002668 | -0.000174 |
| _cons | 3.273213 | 0.026183 | 125.01 | 0.000 | 3.221895 | 3.32453 |

** denotes significance at 1%, * denotes insignificance at 5% *Source: The Researcher’s own Computation (2022) by using STATA software*

This equation can be used to predict the value of the dependent variable, which is log of real GDP per capita, based on a set of values for the independent variables (such as FDI , Foreign aid, remittance, debt and Real Exchange Rate). According to the established GLS regression equation, taking all independent variables constant as zero, log of real GDP per capita for East African countries will be USD 3.2984.

The Effect of Financial Flows

The above table shows that FDI has a linear trend and tend to influence Real GDP per capita strongly at 1% level of significance during the study periods. The coefficient value of FDI was 0.3039. This result reveals that, holding other factors constant, a one dollar (USD 1.00) increase in FDI leads to 0.3039-dollar increase in economic growth, indicating that FDI are advantages for economic growth and development in East African countries. The result was also consistent with the previous empirical findings (Imen Mohamed S., 2021; Driffield and Jones, 2013; and Koojaro enprasit, 2012), therefore; the null hypothesis has to be accepted.

The coefficient value for foreign aid in table 4.4 shows that the contribution of foreign aid to log of real GDP per capita was negative 0.0082, which strongly influence at 1% level of significance in East African countries. This means, when foreign aid increases by 1 dollar, other factors remain constant, log of real GDP per capital decreases by 0.0082 dollar. This persistent negative value of foreign aid in east African countries, in the study periods, is the indication of unproductive utilization of aid and the existence of corruption or misuse of aid resources in unplanned, and even unnecessary, investments due to poor economic policies and management in developing countries. This dynamic negative value also has a long run effect to economic growth and development of the countries as dependency is concerned. The result is similar with empirical studies of Griffin and Enos (1970), Mosley (1980), Phiri Maurice W. (2017), Morrissey (2006), Weiskopff (1972), and Nyoni (1998), hence the null hypothesis has to be rejected.

Remittance had an estimated coefficient value of -0.0202. This value indicates that it had negative effect on real GDP per capital and statistically significant at 1%. This means when the remittance increases by 1 dollar, log of real GDP per capital tend to decrease by 0.0202 dollar in East Africa, holding other factors as constant. It also reveals that when working people get remittance, they tend to spend their time and money on

recreation or leisure and consumption goods respectively, so that their productivity tend to decrease. On the other hand, due to high consumption spending, price of goods and services may raise persistently (hyper inflation or dutch disease will occur), hence, it discourages production and creates economic instability. This would be the main cause for persistent negative effect on economic growth of developing countries in the long run. This finding is also consistent with Neo-classical, Structuralist and Neo-Marxist theories, Tassew & Rao (2016), and Senbeta (2012), who stated that while remittances enhance investment and contribute to physical capital accumulation, lack of efficiency enhancing negative effect on total factor productivity (TFP) growth would make the net effect on economic growth ambiguous. Therefore, the null hypothesis has to be rejected.

Moreover, in the table 4.4, the coefficient value of sovereign debt is 0.1430 at 1 % level of significance. It reveals that public debt had positively significant impact on economic growth of east African countries at 99% confidence interval during the study periods. This also depicts that, in the long run all other things held constant, a one percent increase in sovereign debt increases log of real GDP per capita by 14.30 percent in east African countries. The relationship between public debt and economic growth depends on the level of debt to GDP ratio (which is to be less than 60%), even though macroeconomic fundamentals such as level of external asset, saving culture and willingness of citizen to buy bonds with low coupon rate have positive contribution. Additionally, the quality of institutions and policies, perception about country's risk of insolvency and cost of debt (interest rate) play significant role (Joshua Yindenaba et al., (2021). In this study, debt to GDP ratios for East African countries were at the right track as there is a positive link between debt and economic growth. It indicates the existence of moderately good debt management structure, less indebtedness (burden) due to active debt servicing or restructuring, debt sustainability and positive policy framework. The result was also consistent with other studies such as Oche et al., (2016), Thilanka et al. (2018) and Akomolafe et. al. (2015) hence, the null hypothesis has to be accepted.

The effect of Real Exchange Rate

Furthermore, the real exchange rate (REXR) has negative sign with the coefficient value of 0.0002 and statistically significant at 1 % with 99% confidence interval. This explains the depreciation of real exchange rate by 1% has negative impact or reduces economic growth of east African countries (log of GDP per capita) by 0.02%. Although the depreciation of real effective exchange rate may encourage exports and increase the foreign earnings of the country for the time being, it hurts the economy in long run as the cost of imported raw materials increase continuously. Therefore, the null hypothesis is accepted.

5. Conclusions and Recommendations

5.1 Conclusions

The main objective of the study was to examine the relationship between foreign financial flows and economic growth in East African countries. Based on the study, the researcher provided the following conclusions;

Foreign direct investment (FDI) and public debt had strongly significant and positive contribution to economic growth of East African countries, with their coefficient values of 0.3039 and 0.1430 respectively, at 1 % level of significance. It indicates that FDI inflows are advantages for economic growth and development in East African countries. The relationship between public debt and economic growth depends on the level of debt to GDP ratio (which is to be less than 60%), even though macroeconomic fundamentals such as level of external asset, saving culture and willingness of citizen to buy bonds with low coupon rate have positive contribution. Additionally, the quality of institutions and policies, perception about country's risk of insolvency and cost of debt (interest rate) play significant role.

Other financial flows such as foreign aid and remittance have strongly significant and negative impact on economic growth of east African countries during the study periods. Negative effect of Foreign aid is the indication of aid utilization on unproductive and unnecessarily planned investments and signals the existence of corruption (misuse) due to poor economic policies and resource management in developing countries. It also has a long run effect to economic growth and development of the emerging countries as dependency is concerned.

The finding also reveals that when working people get remittance, they tend to spend their time and money on recreation (leisure) and consumption of non-tradable goods respectively other than investment so that their labour participation and therefore, total factor productivity (TFP) tends to decrease. The high consumption spending leads to the persistent raise in price of non-tradable goods and services (hyperinflation and or Dutch-disease will occur); hence, this discourages production and creates economic instability.

Furthermore, the real exchange rate has negative and statistically significant effect on explaining the economic growth and development of East African countries in the long term. Depreciation of real effective exchange rate by 1 unit increases economic growth by 0.0002. This indicates the depreciation in real effective exchange rate does not promote economic growth in the long term. It may encourage exports and increase the foreign earnings of the country for the time being, but hurts the economy in the long run as the cost of imported raw materials increase continuously.

5.2 Recommendations

Based on the findings, the researcher forwarded the following recommendations to governments, policy makers, researchers, academicians and practitioners.

Inflows of FDI have positive effect on economic growth of the country. To sustain & improve the level of impact, the governments of east African countries have to modify their trade policies, create conducive environment and decrease tariff & other barriers to multinational companies to attract foreign investors and to promote export of domestic products and services as well. However, they have to be selective in the type of investment & prohibit FDI, which can abuse culture and discourage domestic investors.

The positive contribution of public debt to economic growth depends on the level of debt to GDP ratio, the quality of institutions and policies, risk of insolvency and cost of debt (interest rate). Hence, the government and policy makers have to design appropriate policy, create or strengthen existing debt management structures including the right staffing, focus on long- term debt and invest it in a productive manner to cover the periodic costs. They also should determine the optimum debt amount to protect their countries from indebtedness and insolvency.

Negative value of Foreign aid to economic growth in East African countries signal aid ineffectiveness, corruption, poor policy & strategy, and aid dependency. To avoid the shortcomings, they have to focus on aid policy framework, establish strong monitoring & control systems and must reduce aid dependency by inward looking for resources to support their economies.

Similarly, negative effect of remittance has to be detected by developing financial systems that can enhance financial inclusion via allowing formal channel to migrant without legal status, opening bank account to recipients, and expanding financial products and services that can accommodate remittances and integrate access to credit for the recipients. Government also have to identify (or formalize) migrants, design policies encouraging saving & investment, remove tax on inflows of remittance and relax exchange rate.

Devaluation of domestic currency has also a net effect of reducing the real GDP of the country. Thus, central bank should play pivotal role to stabilize exchange rate, as adjusting it to optimum level will have a multiplying cost effect on economic growth in developing countries.

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