Capital Market and Financial Review

Volume: 4 Issue: 1 Year: 2024
(ISSN: 2791-2558)

KMF PUBLISHERS

www.kmf-publishers.com/cmfr/

Capital Market and Financial Review

OPEN ACCESS Freely available online

Research Article

http://kmf-publishers.com/cmfr/

DOI: https://doi.org/10.5281/zenodo.10995918

The Impact of Foreign Aid on Economic Growth: Empirical Evidence from Ethiopia

[1]Mohammed Essa
[2]Dr Parmod Kumar Aggarwal

[1]PhD candidate, PUNJABI University, India
[2]Associate Professor of Economics, PUNJABI University, India

ABSTRACT

The interaction between growth and inflation is one of the macroeconomic problems. Determining the effect of inflation on the economic growth of one country must be considered as a prior issue to build up a healthy economy. The main objective of this paper is to test, whether inflation is an indicator or an obstacle for the economic growth of Ethiopia. For the analysis of the paper, Pairwise Wise Granger causality test has been used to verify the objective of the paper and with the help of this test, we can find the existence of a strong and significant correlation between variables. The test also reveals an unidirectional causation between, real GDP and export (EX) and between real GDP and inflation and real GDP and investment. The causation runs from real GDP to inflation, real GDP to export, and real GDP and investment respectively. In addition, taking the main objective which will be hypothesized that whether inflation causes economic growth or the reversely results. The Granger causality test pertains to unidirectional causation which runs from economic growth to inflation. Accordingly, it can be concluded that economic growth can cause inflation and it will be proved on the basis of the findings. In this paper, there will be an attempt to find out the balance between an economic growth target in line with a monetary policy. It will play a vital role in increasing economic growth and to controll the level of inflation.

Keywords: Economic growth, Ethiopia, Granger Causality, Inflation

Correspondence to: Mohammed Essa, Email: mohammedessa443@gmail.com
Received: January 11, **Accepted:** March 22, 2024 **Published:** March 30, 2024
Citation: Essa, M., & Aggarwal, P.K. (2024) The impact of foreign aid on economic growth: Empirical evidence from Ethiopia. Capital Market and Financial Review, 4(1), 654-663. DOI: https://doi.org/10.5281/zenodo.10995918

INTRODUCTION

Developing countries are characterized by deficiency of economic resources-, specifically capital-related. Capital to boost economic growth and welfare is largely inadequate domestically, which consequently warrants the need for external capital. The only external capital readily available to support development undertakings have to come from foreign aid. It began in the late 1940s to reconstruct and rehabilitate the war-ravaged economies of Western Europe.

African economies have received large inflow of foreign aids in the 1950s. In Ethiopia, the three-year plan period (1957-1973) was started, 25 percent of the required total investment was covered by external public capital. Similarly, after the post-revolution period, 37 percent of the total annual campaign of 1979-83 was financed by foreign aid (Tolessa 2001).

Besides, foreign aid covered 23.2% of total revenue during 2010-11 fiscal year (National Bank of Ethiopia's annual report, 2010-11). This shows that foreign aid has been playing a great role in Ethiopia's economy since the 1950s. There is a significant increase in foreign inflows, but the economic growth achieved by many Sub-Saharan African countries has not been satisfactory.

Thus, the actual role of foreign capital inflow has been an area of controversy. Ethiopia has been one of the major recipients of international aid. It is evident that despite notable donor intervention in the country 's economy, less economic growth and poverty remain inherent for many years. Despite this paradoxical scenario, few researchers are providing the attention of assessing the effectiveness of aid in such a country to find out whether aid has been effective, or whether the persistent poverty in such an aid-dependent country is not the result of the ineffectiveness of aid.

So far done studies are controversial. The study by Abeba' s (2002) shows that aid has negative impact on the economic growth of Ethiopia while the study by Tasew. T (2010) and Yohannes (2011) found that aid has a positive impact on economic growth of Ethiopia. The current study used new methodology with latest and detailed data to examine the impact of foreign aid on economic growth of Ethiopia (i.e. ARDL).

OBJECTIVES OF THE STUDY

The general objective of the study is to investigate the impact of foreign aid on economic growth in Ethiopia from 1974 to 2011 using ARDL approach.

Specific Objectives

- To determine the impact of foreign aid on economic growth.
- To find out whether the impact of foreign aid on economic growth of Ethiopia depends on macroeconomic policy environment or not.

SCOPE OF THE STUDY

- The study used time series data from 1974-2011 for Ethiopia.
- This is because; several country-specific factors may induce apparent differences in the effect of aid on growth, but these factors cannot be fully controlled by a cross-country regression analysis (especially if effectively unobservable); the classical omitted variables problem.
- Panel estimation can account for unobserved country specific effects, but the homogeneous panel estimators used in the aid literature produce inconsistent and potentially misleading estimates of the average values of the parameters in dynamic models when the slope coefficients differ across cross-section units (e.g., Pesaran and Smith, 1995).
- Cross-country analysis is an approach in which each country is treated as a sample point assuming that the impact of foreign inflow is constant across countries that is the same in all LDCs.
- However, the role of external assistance differs greatly from country to country.

- Furthermore, cross-country analysis assumes that countries are homogenous in terms of economic structure and policy reactions.
- However, these countries differ significantly on domestic policy measures and economic, political, cultural, and social structures.

Thus, it is difficult to conclude and recommend policy based on the cross-country. That is, these factors affect. The impact of foreign aid has been found differently in different countries. Thus, the study area is limited to a single country, Ethiopia. The selection of the series has been decided on the basis of available data required for the study.

SIGNIFICANCE OF THE STUDY

In Ethiopia, the number of studies conducted so far on the impact of foreign aid on economic growth is limited in number, in which further study is required. Therefore, this study will help to improve the knowledge gap in a selected area of research. As commonly known aid is the backbone of the Ethiopian economy, therefore the expected outcome from this study could also be useful in improving policy design, institutional setup, implementation, monitoring and evaluation of foreign aid. Besides, it can evoke further study in the area.

METHODOLOGY

Data Sources and Methodology

The necessary data for the paper is collected from various sources such as an Ethiopian Economic Association (EEA), database with the help of CD Rom 2012, the Ministry of Finance and Economic Development (MOFED), the National Bank of Ethiopia (NBE), Ethiopian Central Statistical Authority (CSA), National Metrology Agency, International Monetary Fund (IMF) database, Penn World Table and World Bank Databases.

The method employed in the study is based on recent advancements in the theoretical and empirical aid growth relationships. As the data used is time series, various tests such as testing for stationary (unit root test) and co-integration test are performed. The rank of co-integration is determined by using ARDL. The model is estimated by using Ordinary Least Square (OLS).

Methods of Data Analysis

To arrive at the intended objectives, this study used secondary time-series data analysis for about 20 years. The selection of this sample size is made given the availability of data for each of the variables included in the model for the entire time horizon. Furthermore, in examining the effect of external debt on economic growth the vector error correction model was used.

Model Specification

In this study, the impact of foreign aid on economic growth in Ethiopia is analyzed based on the standard growth accounting model. This paper has examined the nexus between foreign aid, Foreign direct investment, human capital, energy consumption, carbon oxide emission, corruption index, inflation rate, and economic growth in Ethiopia ARDL & ECM models were used. The model shows the influences of Official development AID of Ethiopia with other selected macroeconomic variables in case of both the short and long run. The second model shows the influences of RGDP and other macroeconomic variables on *AID* inflows. Therefore, based on this theoretical framework developed by Markiw, Romer, and Weil (1992) the following two empirically estimative model (with some modification to accommodate other additional variables) is specified; $Model I$: $lagRGDPt$ = (FAID, Co2, EU, INF, Human Capital, corruption index, FDI, inflation) …

Autoregressive Distributed Lag (ARDL) Model

In this research, the study will use Autoregressive Distributed Lag (ARDL) model to examine the influences of external aid in an economic growth of Ethiopia and also examine the influences of RGDP

and other macroeconomic variables on Aid inflows. The autoregressive distributed lag (ARDL) model deals with single co-integration and is introduced originally by

Pesaran and Shin (1999) and further extended by Pesaran et al. (2001). The ARDL approach has the advantage that it does not require all variables to be I (1) as in the Johansen framework and it is still applicable if we have I (0) and I (1) variables in our set. The ARDL has been chosen since it can be applied to a small sample size. Also, it can estimate the short and long-run dynamic relationships between external AIDS and economic growth. The ARDL methodology is relieved of the burden of establishing the order of integration amongst the variables. Furthermore, it can distinguish dependent and explanatory variables and allows testing for the existence of relationships between the variables. Finally, with the ARDL different variables may have differed optimal numbers of lags. ARDL are standard least squares regressions that include lags of both the dependent variable and explanatory variables as regressors (Greene, 2008).

ARDL models are linear time series models in which both the dependent and independent variables are not only contemporaneously, but across historical (lagged) values as well. In particular, it is the dependent variable and is k explanatory variable, a general ARDL (P, ql, q2....qk) model is given as:

$Yt = \gamma 0i + pi=1\ \theta iYi-t + qi=0\ \beta jXt-i + \epsilon it$... 1

In this paper, I employed the Autoregressive Distributed Lag (ARDL) model to examine the influences of official development assistance inflows and other macroeconomic variables on RGDP growth. The autoregressive distributed lag (ARDL) model deals with single co-integration and is introduced originally by Pesaran and Shin (1999) and further extended by Pesaran et al. (2001). The ARDL approach has the advantage that it does not require all variables to be I (1) as in the Johansen framework and it is still applicable if we have I (0) and I (1) variables in our set.

The ARDL has been chosen since it can be applied for a small sample size as it happens in this study. Also, it can estimate the short and long-run dynamic relationships in foreign aid and economic growth. The ARDL methodology is relieved of the burden of establishing the order of integration amongst the variables. Furthermore, it can distinguish dependent and explanatory variables and allows testing for the existence of relationship between the variables. Finally, with the ARDL different variables have differing optimal numbers of lags. ARDL are standard least squares regressions that include lags of both the dependent variable and explanatory variables as regressors (Greene, 2008). ARDL models are linear time series models in which both the dependent and independent variables are not only contemporaneously, but across historical (lagged) values as well.

In particular, if is dependent variable and are k explanatory variable, a general
ARDL (P, ql, q2.... qk) model is give as;

Σ Σ Where is a vector and variables in ( )‘ are allowed to be purely I(0) or I(1) or co-integrated; θ and β are coefficient is the constant; i=1,2...,k: p, q are optimal lag orders; is a vector of the error terms un observable zero mean white noise vector process(serially uncorrelated or independent).

The model is autoregressive‖ in the sense that is explained (in part) by its lagged values. It also has a distributed lag‖ component, in the form of successive lags of the X‖ explanatory variable. Sometimes, the current value of itself is excluded from the distributed lag part of the model ‘s structure. To know the existence of long-run and short-run dynamics between Official Development Assistance and economic growth models.

Error-Correction Models

The study explores the issues surrounding the analysis of co-integration and the Error Correction

model within the Distributed Lag model framework; i.e. the Autoregressive Distributed Lag Approach to co-integration. The Error Correction Model (ECM) can be derived from the ARDL model through a simple linear transformation, which integrates short-run adjustments with long-run equilibrium without losing long-run information. If there is evidence of long-run relationships (co-integration) between the variables from the ARDL bounds test based on model one and model Two, the general Error-Correction Models (ECM) can be specified as below:

$$\Delta Yt = \delta i + \theta 1ipi=1 \Delta Yt-1 + \beta 1jqj=1 \Delta Xt-j + \lambda iECMt-1 + \epsilon it \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (20)$$

Where $ECMt-1$ is the error correction term extracted residuals from the regression of the long run equation based on the representation theorem (Engle and Granger, 1987), and where Yt and Xt are the vector of the variables included in the model ($lnRGDP$, F(variables)t. and $\delta i$is the vector of constant terms, $\beta 1j$and$\theta 1i$are the matrices which include the interaction coefficients of the variables involved in equation, $\lambda i$is the vector of coefficients for each of the error correction terms and $\epsilon it$is the vector of disturbance terms.

Table 1. The Results of F-Test for Co-integration (Result & Discussion)

Dependent Variables	F- values		Decision
D(LnRGDPt)		7.78***	Co-integration
D(lnLF)		2.73	No co-integration
D(LnA)		2.32	No co-integration
D(Ln(M2/RGDP))		2.19	No co-integration
D(LnPINV)		1.39	No co-integration
D(lnH)		2.599	No co-integration
D(LnA*LnPINDEX)	2.19		No co-integration
D(LnMEANR)	1.14		No co-integration

The assumption of only one co-integrating vector is fulfilled that is only D (LnRGDP) is endogenous variable

Table2. Estimated long run coefficients using the ARDL approach ARDL (1,0,0,0,0,0,0,1) selected based on Akaike information criterion: dependent variable Ln(RGDP).

Variable	Coefficients	t-ratio	Probability
LnPINV	0.075474	1.5206	0.140
lnLF	-1.6017	-3.1581	0.004
LnA	-0.65813	-3.2272	0.003
LnMEANR	0.57904	1.7894	0.084
Ln(M2/RGDP)	0.15630	2.7716	0.010
lnH	2.7246	5.9616	0.000
LnA*LnPINDEX	0.20526	3.5549	0.001

Note: *=significant at 10%, **=significant at 5 % and *** significant at1%

Where λ is the speed of adjustment parameter and EC is the residuals that are obtained from the estimated cointegration model of equation (9). The study is based on the annual time series data from 1974 to 2011. The total number of observations is 38.

Data analysis was performed by Eviews 5 and Micro fit 5. Before proceeding with the ARDL bounds test, the unit root test was done. This is to ensure that the variables are not I(2) stationary to avoid spurious results because the bounds test is based on the assumption that the variables are I(0) or I(1). Only mean annual rainfall was found stationary at level, while other variables were stationary after the first difference.

ARDL co-integration test assumed that only one long-run relationship exists between the dependent variable and the exogenous variables (Pesaran S. and Smith, 2001, assumption 3).To test whether this is appropriate in the current application, the entire variables were changed to dependent variables to compute the F-statistic for the respective joint significance in the ARDL models (Narayan P, 2004). Since AIC tends to have practical performance advantages over BIC (Burnham KP and Anderson DR. 2002; 2004) the lag length is selected by AIC (Table).

Long run and Short run Coefficients

Once co-integration is established, the conditional ARDL long-run model for Ln(RGDP) can be estimated and the result is presented in Table 2. Foreign aid taken separately hurts RGDP, One percent change in foreign aid-RGDP ratio results in -0.658% in RGDP change. Javid M and Qayyum A (2011) mentioned that Donor conditionality, poor governance, tied aid, kickbacks paid to foreign contractors, and weak state institutions might be the causes of the failure of the contribution of foreign aid in the development process of the economy. Easterly and Pfutze (2008) as

Table3. Estimated coefficient of short run dynamics (error correction) ARDL (1,0,0,0,0,0,0,1) selected based on Akaike Information Criterion, dependent variable is D(RGDP)

Variables	Coefficients	t-statistics	Probability
D(LnPINV)	0.032377	1.5740	0.126
D(LnLF)	-0.68712	-2.8868	0.007
D(LnA)	-0.28233	3.3459	0.002
D(LnMEANR)	0.089	0.72749	0.473
D(LnH)	1.1688	3.4554	0.002
D(LnA*LnPINDEX)	0.088054	3.4035	0.002
D(M2/RGDP)	0.067051	2.7999	0.009
ecm(-1)	-0.42898	-4.1476	0.000

Note: *=significant at 10%, **=significant at 5 % and *** significant at1%

This might also be true in Ethiopia (Table 3). The coefficient on the lagged error-correction term is highly significant at a one percent level of significance with the expected sign, which confirms the result of the bounds test for co-integration. Its value is estimated to be -0.429 which implies that approximately 0.429% of disequilibria from the previous year 's shock converge back to the long-run equilibrium in the current year. Foreign aid and RGDP have a negative relationship; the one percentage change in the percentage of foreign aid – RGDP ratio causes RGDP to be changed by 0.282%, with other variables remaining constant. When aid interacts with the policy index it has got positive coefficient and is highly significant. This shows aid is effective when supplemented with a good macro policy environment. This positive result is similar to that of Yohannes B (2011) in Ethiopia.

The Long run equation is: RGDP= 0.075474*LnPINV - 1.6017*LnLF - 0.65813*LnA (0.0496) (0.5071) (0.2393) + 2.7246*LnH + 0.20526*(LnA*lnPINDEX) (0.4570) (0.057)+0.156 30*Ln (M2/RGDP) + 0.57904*LnMEANR + ecm (0.0564) (0.3236) (0.1034)
Figures in parentheses are standard error
As can be seen from Table 4 both long-run and short-run models pass all the diagnostic tests against serial correlation Breusch-Godfrey test, heteroscedasticity (White Heteroskedasticity Test), and normality of errors (Jarque-Bera test). The Ramsey RESET test also suggests that the model is well-specified.

STABILITY TEST

The stability of the long-run coefficient is tested by the short-run dynamics. Once the Error correction model has been estimated the cumulative sum of recursive residuals (CUSUM) and the CUSUM of square (CUSUMSQ) is applied to assess the parameter stability (Pesaran, 1997). The results indicate the absence of any instability of the coefficients because the plot of the CUSUM statistic and the CUSUM of square (CUSUMSQ) fall inside the critical bounds of the 5% confidence interval of parameter stability.

RESEARCH METHODOLOGY

The selection of zones is one of the 6 nationalities i.e., administrative zones and 1 special wereda in the recently restructured central region situated at about 173 km on the south of the capital city of Ethiopia road. Siltie zone was established in 2001 by combining different areas following the establishment of Siltie self-identity. At present, there are 10 weredas and five towns including the present Werabe town. Therefore, in all directions the administrative center of the zone is werebe. The Siltie zone is dominated by different chains of mountains including the Balche Gafat and Amuste Mountains. Regarding relative location, it shares common boundaries with Siltie Hulbareg Alicho Wuriro and Dalocha in the north, south, east, and west, and rural villages of Dalocha Town. Astronomically, the Zonal capital, Werabe Town, is located within an approximate geographical coordinate of 80 53' 38.50" N- 80 59' 58.17" N latitude

and 380 35' 11.91" E- 380 39' 33.75" E longitude on the globe and its average elevation is 2365 meters above sea level.

Types, Sources, and Methods of Data Collection

In this study, both qualitative and quantitative data will be collected from primary and secondary sources. Primary data will be collected from selected investors using semi-structured questionnaires. The study will collect relevant information about the investors from the owner /managers of the investment who represent the investment as a business entity. The questionnaire will be pretested by experts and investors in the study area and necessary modifications will be made for final data collection. Finally, the questionnaire designed for the private investors will be translated into the local language Siltigna to make it clear and collect real data from respondents. Furthermore, secondary data will be collected from the Zonal or Werabe town investment office's annual reports, and different published and unpublished sources (from 2004-2014).

REFERENCES

Abeba S (2002), ―macroeconomic impacts of external assistance in Ethiopia‖ A thesis submitted to the School of Graduate Studies of Addis Ababa University in Partial fulfillment of the requirements for the Degree of Master of Science in Economic Policy Analysis in Department of Economics.

Adugna L (2004), ―Anatomy of foreign aid to Ethiopia: 1960-2003‖, university of Massachusetts Boston.

African development bank group (2000), ―Ethiopia's structural adjustment programme project performance evaluation report‖ operations evaluation department

African economic outlook report (2012), ―Ethiopia Full PDF Country Note‖

Alemayehu G (2005), ―The Political Economy of Growth in Ethiopia‖ Chapter 4 of volume 2 Addis Ababa University

Alemayehu G and Kibrom T (2011), ―Official Development Assistance (Aid) and Its Effectiveness in Ethiopia‖, Institute of African Economic Studies.

Art C. (2009), ―On Foreign Aid and Economic Change‖, the Journal of Private Enterprise 25(1), 2009, 105-123 Rhodes College.

Baafi J (2010), ―Ghana's economic growth in perspective: a time series approach to convergence and growth determinants‖ , Södertörns Högskola Soderteor university Master Thesis

Barros AP, Kim G, Williams E, Nesbitt SW (2004), ―Probing orographic controls in the Himalayas during the monsoon using satellite imagery‖: Natural Hazards and Earth Systems Science. 4: 1–23

Batana MY (2009), ―Aid and Poverty in Africa‖ University of Montreal

Bauer P (1972), ―Dissent on development‖, Cambridge: Harvard University Press.

Bauer P (1991), ―The development frontier‖ essays in applied economics. London: Harvester Wheat sheaf.

Berhanu N, Seid N. (2004) ―Determinants of Low Growth in Ethiopia: Beyond Traditional Factors‖, Proceeding of the 1st International Conference on the Ethiopian Economy.

Boone P (1996), "Politics and the effectiveness of foreign aid", European Econ. Rev. 40: 289 329.

Brautigam DA, Knack S (2004), ―Foreign aid, institutions, and governance in Sub-Saharan Africa‖, Economic Development and Cultural Change, 13:255-285.

Bring J (1994). ―How not to find the Relationship between Foreign Aid and Economic Growth‖, Appl. Econ. Letters. 1: 32–33.

Burnham KP, Anderson DR (2002), ―Model Selection and Multi model Inference: A Practical Information‖, Theoretic Approach

(2nd ed.), Springer-Verlag, ISBN 0-387-95364-7.

Burnham KP, Anderson DR (2004), "Multi model inference: understanding AIC and BIC in Model Selection‖ second edition

Burnside C, Dollar D (2000), "Aid, policies, and growth", Ame. Econ. Rev. 90: 847–868

Cashel-Cordo P, Craig SG (1990), "The Public Sector Impact of International Resource Transfers", J. Develop. Econ. 32. Chenery HB, Strout A (1966), —Foreign assistance and economic development,‖ Ame. Econ. Rev. 56: 679-733. Clements Benedict, Sanjeev Gupta, Alexander Pivovarsky, Erwin R.

Tiongson (2004). —Foreign Aid: Grants versus Loans, Finance and Development‖

Dalgaard CJ, Hansen H, Tarp F (2004), "On the empirics of foreign aid and growth," Econ. J.114:191–216.

David R (2004), —The Anarchy of Numbers: Aid, Development, and Cross-country Empirics‖, working paper number i

Dritsakis N (2012), —Demand for money in Hungary: An ARDL Approach‖ Department of Applied Informatics University of Macedonia Economics and Social Sciences 156 Egnatia Street, 540 06 Thessaloniki, Greece

Dollar D, Collier P (2001). —Can the world cut poverty in half? How policy reform and effective aid can meet the international development goals‖, World Development 29(11): 1787-1802.

Doucouliagos H, Paldam M (2008), "Conditional aid effectiveness: a meta-analysis", J. Int.Develop. 21(7):1582-1601.

Dierk H, Oliver M (2011), —Long-Run Aid Effectiveness‖ - paper #144,

CSAE Conference 2011, Economic Development in Africa, Oxford, March 20-22

Dowling M, Hiemenz U (1982), "Aid, Savings and Growth in the Asian Region," Economic Office Report Series 3, Asian Development Bank: Manila.

Durbarry Ramesh, Norman Gemmell, David Greenaway (1998), —Ne Evidence on the Impact of Foreign Aid on Economic Growth‖, Centre for Research in Economic Development and InternationalTrade, University of Nottingham

Easterly WR, Rebelo ST (1993). —Fiscal Policy and Economic Growth: An Empirical Investigation‖. J. Monetary Econ. 32(3)

Easterly W (2003). —Can Foreign Aid Buy Growth?‖ J. Econ. Perspectives. 17(3): 23-48

Ekiring Rachael (2000), —Impact of Foreign Aid on poverty Alleviation in Developing Countries: With an Application to Uganda‖, Maastricht School of Management, The Netherlands.

FASANYA Ismail O, ONAKOYA Adegbemi BO (2012) —Does Foreign Aid Accelerate Economic Growth?An Empirical Analysis for Nigeria‖ , Int. J. Econ. Fin. Issues

Feeny S (2005), —the Impact of Foreign Aid on Economic Growth in Papua New Guinea‖, the journal of development studies.

Feeny S, McGillivray M (2008), "Aid allocation to fragile states: absorptive capacity constraints," J. Int. Develop. 20(7):1031-1050.

Frey B, Schneider F (1986), "Competing Models of International Lending Activity" J. Develop. Econ. 20

Friedman M (1958), "Foreign Economic Aid: Means and Objectives", Yale Review. 47.

Fosu OE. Magnus FJ (2006) —Bounds Testing Approach to Co-integration : An Examination of Foreign Direct Investment Trade and Growth Relationships‖, School of Business, Garden City University College, P.O. Box KS 12775, Kumasi, Ghana KNUST School of Business, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana

Gang IN, Khan HA (1991), "Foreign Aid, Taxes and Public Investment", J. Dev. Econ. 34.

Getnet A (2009), —A case study on aid effectiveness in Ethiopia, analysis of the health sector aid

architecture‖, Wolfensohn center for development working paper

Ghatak S (1986). —An Introduction to Development Economic‖, Allen and Unwin Ltd. London, P129.

Griffin KB, Enos JL (1970), "Foreign Assistance: Objective and Consequences", Economic Development and Cultural Change. 18:313-327

Gupta KL, Islam MA (1983). —Foreign Capital, Savings and Growth—an International Cross- Section Study‖, Reidel Publishing Company: Dordrecht.

Hansen H, F Tarp (2000), "Aid effectiveness disputed," J. Int. Develop. 12: 375-398 Hansen H, Tarp F (2001), —Aid and growth regressions‖, J. Develop. Econ. 64: 547-570.

Hansen H, Tarp F (2002). —Aid and growth regressions‖ DERG, University of Copenhagen, Denmark

Harris R, Sollis R (2003). —Applied Time Series Modeling and Forecasting‖ Durham University Herzer D,

Morrissey O (2004). —Long-Run AidEffectiveness‖ CSAE Conference2011,Economic Development in Africa, Oxford, March 20-22 paper 144

Hudson J, Mosley P (2001), —Aid Policies and Growth: In Search of the Holy Grail‖, J. Int.Develop. 13:1023–1038.

M'Amanja D, Morrissey O (2005). —Foreign Aid, Investment and Economic Growth in Kenya: A Time Series Approach‖, CREDIT Research Paper 06/05. Nottingham: University of Nottingham.

Mbaku JM (1993), —Foreign aid and economic growth in Cameroon‖, Applied Econ, 25: 1309– 1314.

Melaku T (2013) —Can Ethiopia's Economic Growth Sustain without saving?‖ Addis Abeba chambers of Commerce and sectoral association.

Morrissey O (1990), "The impact of Multilateral and Tied Bilateral aid on the U.K. Economy", J. Int. Develop. 2(1)

Mosley P (1980). "Aid, savings and growth revisited," Oxford Bulletin of Economics and Statistics, 42(2):79–95.

Murthy VNR, Ukpolo V, Mbaku JM (1994), —Foreign Aid and Economic Growth in Cameroon: Evidence from Cointegration Tests‖, Applied Economic Letters. 1(10): 161–3.

Narayan P (2004). —Reformulating Critical Values for the Bounds Fstatistics Approach to Cointegration: An Application to the Tourism Demand Model for Fiji‖Monash University Victoria 3800 Australia

Njeru J (2003). —The impact of foreign aid on public expenditure: The case of Kenya‖ AERC Research Paper No 135. African Economic Research Consortium, Nairobi, Kenya

Papanek GF (1972). —The effect of aid and other resource transfers on savings and growth in less developed countries‖, The Econ. J. 82: 934-950.

Papanek GF (1997). —The effect of aid and other resource transfers on savings and growth in less developed economies‖, J. Pol. Economy, 82: 120–30.

Pesaran MH, Shin Y (1997), —An Autoregressive Distributed Lag Modeling Approach to Cointegration Analysis‖ Trinity College, Cambridge, England Department of Applied Economics, University of Cambridge, England

Pesaran MH, Shin Y, Smith RJ (2001), —Bounds testing approaches to the analysis of level relationships‖, J. Applied Econometrics, 16: 289-326.