College of Business and Economics

School of Commerce

Economics Program Unit

THE EFFECT OF EXTERNAL FINANCE ON ECONOMIC GROWTH IN ETHIOPIA: AN AUTOREGRESSIVE DISTRIBUTED LAG MODELLING APPROACH

Submitted by:

Hailemichael Kebede (GSE/5806/12)

June, 2022

Addis Ababa, Ethiopia

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A thesis submitted to the department of economics in partial fulfillment for the requirements of Master of Science in Development Economics.

Advisor: Dr. Sisay Debebe

Submitted by:

Hailemichael Kebede (GSE/5806/12)

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DECLARATION

I, the undersigned, declare that this Master's thesis paper entitled *"The Effect of External Finance on Economic Growth in Ethiopia: An Autoregressive Distributed Lag Modeling Approach"* is my original work prepared under the guidance of Sisay Debebe (PhD). All sources of materials used for this thesis preparation have been duly acknowledged. I also declare that this paper has not been submitted either in part or in full to any other higher learning institution for earning similar or any other degree.

Name: Hailemichael Kebede

Signature: _____

Date: _____

CERTIFICATION

This is to Certify that the thesis prepared by *Hailemichael Kebede*, entitled: *"The Effect of External Finance on Economic Growth in Ethiopia: An Autoregressive Distributed Lag Modeling Approach"* submitted in partial fulfillment of the requirements for the degree of *Master of science in Development Economics* complies with the regulations of the University and meets the accepted standards with respect to originality and quality. Signed by the Examining Committee:

Advisor: _____ Signature: _____ Date: _____

Internal Examiner: _____ Signature: _____ Date: _____

External Examiner: _____ Signature: _____Date: _____

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LIST OF ABBREVIATIONS AND ACRONYMS

ARDL:	autoregressive distributed lag model
EEA:	Ethiopia economic association
FDI:	foreign direct investment
LDCs:	least developed countries
MDGS:	millennium development goal
MOF:	ministry of finance
NBE:	National Bank of Ethiopia
ODA:	official development assistance
rGDP:	real gross domestic product
SSA:	Sub- Saharan African countries
UNCTAD:	united nation country trade and development
USAID:	united states agency for international development
WB:	World Bank

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ABSTRACT

External financial sources are considered as one of the very important accelerators of economic growth. Development requires economic growth to alleviate poverty, and external financial sources are perceived as a necessary condition for more rapid growth. A descriptive and quantitative research approaches were conducted with the aim to examine the overall effects of external sources of finance on economic growth of Ethiopia. An Autoregressive Distributed Lag (ARDL) model was used to estimate the short and long run relationship of variables using time series data sets from 1990-2021 G.C. The results shown that external debt and grant have a positive and statistically significant while remittance and foreign direct investment have a positive but not statistically significant effect on real gross domestic product in the long-run. In the short-run, remittance and grant have positive but statistically not significant effect on rGDP at their current values. External debt has a negative and statistically not significant effect on rGDP at its current value. FDI has a negative and significant effect on rGDP both at its current and lagged value. From the empirical results it can be concluded that external finances support the process of economic growth hence there by support the process of poverty reduction in Ethiopia in the long-run. Absorptive capacity, institutional and bureaucratic quality should be improved to alleviate the inefficiencies of external finances in economic growth in the short-run and maximize the benefits earned from external financial resources.

Key words: *external finance, rGDP, remittance, grant, external debt, FDI, ARDL*

CHAPTER ONE: INTRODUCTION

1.1. Background of the Study

External financial sources are considered as one of the very important accelerators of economic growth. The economics literature supports the contention that development requires economic growth to alleviate poverty, and external financial sources are perceived as a necessary condition for more rapid growth. To this end many developing countries have working to increase their international collaboration to achieve the MDGs. Efficient flow of funds through a sound and stable financial system helps in accelerating the growth of an economy (Tu *et al*., 2019). External sources of financing can be seen as a source of foreign currency and capital to fill the resource gap of developing countries through increasing investment and saving and hence increasing economic growth.

Remittances, grants, external debts and foreign direct investment are the main external sources of financing for countries particularly for developing countries like Ethiopia to alleviate poverty and promote economic growth. Remittances are the cash inflows coming from foreign countries as a result of migrants remitting or transferring money to their home country. These flows of cash are increasing rapidly in developing countries. The history of transferring money by migrants to their country is very significant and cannot be underestimated since remittances have significant impact on economic growth. The World Bank (2017) has reported that remittance flows to many developing countries are higher than grant and more stable than private capital flows. India is reported to be the top remittance receiving country in the world, receiving 65.4 billion dollars followed by china with 62.9 billion dollars. In Africa the top remittance receiving country is Nigeria earning 19.8 billion dollars (World Bank, 2017).

Economic theories support that a sound amount of external debt will help both developed and developing countries to promote their economic growth. Debt overhang and liquidity constraint theories have been used to understand the growth implications of external debt. Debt overhang means a huge debt burden and the ability of a country for repayment of its external debt is reduced (Diamond and He, 2014). This means that the debt burden is high and all incomes are used to pay existing debt which in turn reduces future new investments and leads to stagnant growth and reduced standard of living with low provision of funds for infrastructure, health and education (Turan and Yanikkaya, 2021).

According to these theories, higher debt levels will hinder economic growth because of the reason that increasing in borrowing will increase interest rate which leads to higher cost of borrowing for investment as well as consumption and crowding effect will occur (Sami and Mbah, 2018). External debt is the main and important sources of finance which is used to support economic growth of a country and fill the gap between government expenditure and domestic savings to achieve national objectives.

In Ethiopia, in the last two decades to achieve robust growth in infrastructure, health, education and other sectors and to alleviate poverty; the government has spent significant amount of resources. Given the limitation in revenue mobilization; external borrowing is required by the government. Hence, foreign loans are a vital financing instrument to bring socio-economic development and to stabilize the economy from external and internal shocks. Central government external debts, non-guaranteed external debts and government-guaranteed external debts are the three types of external debts based on the organization that is borrowing (MOF, 2021). Total external debt in Ethiopia increased at an annual growth rate of 20% from USD 2.3 billion in 2006/2007 to USD 28.6 billion in June 2020 (MOF, 2021). Multilateral, bilateral and private credits are sources of external debt.

Lack of sufficient investment and saving, budget deficits and low government revenues are the main reasons which lead governments particularly in developing countries to the debt market (Gohar *et al*., 2012). Government borrowing may have a positive or negative effect on economic growth depending on weather the debt is used in a productive way or not (Presbitero, 2012). Presbitero (2012) found that developed countries are better at managing debts than developing countries which are poor in managing and using the debt in a way that will add a value to the economy. It is also necessary to use the borrowed money in future productive investments to reduce the negative impacts of debt on economic growth and keep the financial sustainability of the country.

Foreign direct investment is an amalgamation of a bundle of capital stock and technology that can enrich the existing knowledge and capital capacity in the host economy. Economists assume that FDI plays an important role in economic growth of developing countries by creating business competition to increase productivity and export, increasing employment opportunity and technical know-how in domestic markets (Mohd and Muse, 2021).

African governments particularly in sub Saharan Africa considers FDI as a main priority for economic growth even if it is smaller than other regions (2.9% of worlds FDI) due to low level of infrastructure, social unrest, unstable exchange rate and unexpected inflation. Although Ethiopia is one of the top FDI recipients of the continent in this decade relative to other countries of the continent, FDI is not sufficient in the country. However, FDI plays an important role in the economic growth of Ethiopia as a source of knowledge and capital, technical know-how and managerial skills (Astatike and Assefa, 2005).

Grants or Official Development Assistances (ODA) are also external sources of financing for an economy particularly for developing countries. The main objective of ODA is to promote economic growth by providing educational infrastructure, creating macroeconomic stability

for economies that are in shocks and financing the health sector. However, this would be achieved if there is a sound system of governance, working market conditions and efficient utilization of the aids by aid receiving countries (Hongxing *et al*., 2021).

Economic growth depends on expanding productivity through investment and investment in turn requires investible resources and saving. However, the ratio of saving to GDP of developing countries is low (specifically Ethiopia) due to low income, insufficient domestic saving and low investable capital resources which leads to poverty trap and it is expected to be filled by external sources of financing. Therefore, Aid is necessary to fill the gap between the required investment and domestic saving of developing countries to have a better growth of the economy. Foreign aid flows from developed countries to developing countries in the form of official development assistance to promote economic growth and alleviate poverty (Fisseha, 2007).

The main motivation behind this study was to examine the role that external sources of finance inflows play in fostering economic growth in Ethiopia and provide up-to-date conclusions and recommendations which can be considered in decision making process of economic policy makers. Examining each factors of external finance in detail can serve as a ground for economic growth. Hence, by implication, the aim of this paper was to examine the overall impacts of external sources of financing on economic growth of Ethiopia using rGDP as a dependent variable and the main variables of external sources of financing (remittance, grants, debt and foreign direct investment) as independent variables.

1.2. Statement of the problem

International economic cooperation is a result of international trade, capital flows and migration. International migration has played a crucial role in increasing the scope of international economic integration and thus plays the same role at international capital flows and cross-border movement of goods and services (Depken *et al*., 2021).

In Ethiopia, the economy is characterized by saving-investment gap and trade gaps. According to the report of UNICEF, budget deficit of Ethiopia accounts for 20% of the total approved federal budget in 2019/20 fiscal year (UNICEF, 2020). Another report of IMF in its debt sustainability analysis suggests that current account deficit of Ethiopia accounts for 4.5% of GDP of the country (IMF, 2020). This is due to tax avoidance and evasions by business owners. Revenue productivity of taxes is very low and because of inefficiencies and social objectives, profits of public enterprises are negligible for investment.

Thus, the government have not any other choice than external sources of finance to fill the gap between public expenditure and the actual revenue of the country. This makes external sources of financing such as remittances, grants, debts and FDI as main sources of financing to have sustainable economic growth (Atinafu, 2020).

External debt in long-run and external debt stock in the short-run were reported to have a statistically significant and negative relationship with economic growth and whereas debt servicing being statistically insignificant (Atinafu, 2020). Another empirical study shows that external debt stock to GDP and ratio of debt service stock to GDP have a significant negative impact on economic growth both in the long-run and short-run in Ethiopia and confirmed that the debt overhang hypothesis holds true in Ethiopia (Getnet and Ersumo, 2020).

An empirical estimated result of the long-run analysis of the relationship between aid and intensive growth mainly aid given in the form of grant is negative at a highly significant level

but in an extensive growth model; the positive effect of aid given in grant form was nullified by high level of population growth (Fisseha, 2007). However, a study conducted by Tadesse (2011) showed that foreign aid is found to have a positive and statistically significant influence on investment and played an important role in promoting domestic capital formation and has been used effectively for financing domestic investment projects.

Some of the studies conducted on the impact of FDI on economic growth of Ethiopia show a significant positive impact for both the short-run and long-run periods (Gizaw, 2015; Mohd and Muse, 2021).

An empirical result about the relationship between remittance and economic growth indicates that there is a negative and significant relationship between remittance and economic growth using a panel data of 93 low and middle-income countries (Lacheheb and Ismael, 2020). In Ethiopia remittances have a positive significant impact on economic growth through increasing real private investment and fixed capital accumulation which increases capital accumulation, reduction in current account deficit, external debt burden and improving educational skills of the households through improving human capital (Yaekoba, 2014). According to this finding remittance have a strong and statistically significant long-run impact on poverty reduction. Another finding suggests that there is a short run significant impact of remittances on economic growth while it affects the economy negatively in the long-run (Tolcha and Rao, 2016).

There are some studies that have been conducted on the individual variables of external finance such as remittances, grants, debts and foreign direct investment and their impacts on the economic growth of Ethiopia. Few priori empirical studies exist on the overall impact of external finance and is not well explored. However, as it is indicated above the scanty attempts on individual variables of those studies are having their results in absolute contradiction and inconsistency. On one hand, there are factual reports on saving-investment

and trade gaps which are covered by external financial sources (UNICEF, 2020 and IMF, 2020). On the other hand, there are inconclusive and inconsistent results on the empirical studies that were conducted in individual variables. These contradictory and inconsistent results vis-a-vis trade and saving-investment gaps calls for further investigation on how economic growth in Ethiopia is impacted by external sources of finance.

This study aimed to examine the current performance of external sources of financing in accelerating the economic growth of Ethiopia based on real actual time series data from 1990-2021 and it examined the effects of external sources of financing on promoting economic growth and reducing poverty. An autoregressive distributed lag model was used analyze the data to check on the effects of external financial sources. The study also used a descriptive approach to measure the flow of external sources of financing such as remittances, grants, debts and foreign direct investment.

1.3. Research Objectives

1.3.1. General objective of the study

The general objective of the study was to examine the effects of external financial sources on economic growth in Ethiopia.

1.3.2. Specific objectives of the study

- To measure the performance of external finance sources in Ethiopia
- To examine the effects of remittances, grants, external debt and foreign direct investment on economic growth in Ethiopia in the short-run.
- To examine the effects of remittances, grants, external debt and foreign direct investment on economic growth in Ethiopia in the long-run.

1.4. Research questions

1. What is the performance of external sources of financing during the study period?
2. What are the short-run effects of remittances, grants, external debt and foreign direct investment on economic growth in Ethiopia?
3. What are the long-run effects of remittances, grants, external debt and foreign direct investment on economic growth in Ethiopia?

1.5. Significance of the study

Flow of external sources of financing is one of the main contributors of the economy. The results and recommendations of this study will have the following significance; it will help the Government; to create conducive environment by identifying the major constraints of flow of external sources of financing and to create sound and stable financial systems in Ethiopia since they are main sources to fill the gap in foreign currency and saving-investment. It will also helpful for remitters and donors; to understand the major constraints which hinder their activity and create awareness to escape from such constraints. For Researchers; it may serve as bench mark to conduct further and extensive research on this area. For others; to provide information about the current performance and impacts of external sources of financing on economic growth and factors affecting it in Ethiopia.

1.6. Scope of the study

The scope of the study was bound to examining the effects of external sources of financing for economic growth in Ethiopia for the fiscal year of 1990-2021. The performance of external sources of finance was also measured for the aforementioned period.

1.7. Limitations of the study

This study was limited to analyzing the effects of external sources of finance for the fiscal years 1990-2021 G.C. only. The years before 1990 G.C. could not be done because of issues related with absence of relevant form of data and inconsistencies when there were any.

1.8. Hypothesis

Based on the observed real feature of the variables of external sources of finances in Ethiopia, this research hypothesized the following tentative predictions that were tested under the study;

Null hypothesis (H_0): external financial sources (remittance, debt, grant and foreign direct investment) have no direct positive effect on economic growth in Ethiopia

Alternative hypothesis (H_1): external financial sources have a direct positive effect on economic growth in Ethiopia.

1.9. Organization of the study

This paper has five chapters. The first chapter contains the background, statement of the problem, objective, research question, significance, hypothesis and scope of the study and organization of the paper. The second chapter literature review, chapter three methodology, chapter four data presentation, analysis and discussion and the final chapter is summary, conclusion and recommendation.

CHAPTER TWO: LITERATURE REVIEW

2.1. Theoretical literature review

2.1.1. Definition of key concepts of variables

External financial sources are financial sources that come from abroad of a nation's business in the form of remittances, debt, grant and foreign direct investment (IMF, 2014). Remittances are external financial sources that are transferred by migrants to households voluntarily and in a private manner (Shera and Meyer, 2013). Grants or official development assistances are funds donated from governments of developed countries, charitable foundations, public bodies and grant-making institutions to households, governments and or an entity and they are not paid back like debts (Bergvall *et al.*, 2006). External debts are external sources of finance that are borrowed by governments from foreign creditors to promote economic growth and reduce poverty (IMF, 2014). Foreign direct Investments are cross-border investments made by companies that are owned by foreign investors and multi-national companies (Kukaj and Ahmeti, 2016).

2.1.2. External sources of financing and economic growth

Flow of external sources of financing has been considered as an engine of economic growth of country particularly for developing countries. Many studies have come up with different results regarding the impact of external sources of financing specially for developing economies. According to these studies, most developing economies have benefited from remittances, grants, loans and foreign direct investment. The less developed countries view flows of external sources of financing as proverbial engine of economic growth and stable source of foreign currency (Tadesse and Abafia, 2019; Asafo-Adjei, 2021).

2.2. Theoretical Concepts on Economic Growth

The concept of external sources of financing starts on the theories of Harrod (1939) and Domar (1946) which was derived from the thoughts of Keynes (1936) that linked economic growth and capital investment through the idea of incremental capital output ratio (ICOR). Both supports the notion of increase in capital investment directly increases economic growth. According to this growth model, the growth rate of an economy is linked to two fundamental variables. The capacity of the economy to save and capital-output ratio, i.e., increase in saving increases economic growth and increases the rate at which capital produces output increases economic growth.

Kuznets (1955) and Rostow (1956 and 1961) support the notions of Harrod-Domar. Rostow proposed the importance of external capital as a source to reduce the economic problems of developing countries (Fisseha, 2007). Browne (1990) Suggests that external capital could play a main role in supporting an economy of a country to meet the first condition for take-off.

The neoclassical economic growth in its solow-swan growth model postulates that short-run economic equilibrium is a result of varying amounts of labor and capital that play an important role in the production process. This theory suggests that technological progress importantly influences the overall activities of an economy (Solow, 1956; Swan, 1956). This theory also argues that short-run equilibrium is totally different from long-run equilibrium and do not necessitate the above mentioned three factors of production.

According to this theory, capital accumulation is another factor which plays a decisive role in economic growth depending on how people make use of it. It further states that technology increases labor productivity there by increasing the total output of the economy and hence leads to economic growth.

However, Solow model postulates that savings rate has only level effect, there is a steady state level of per capita income to which the economy must converge and regardless of initial per capita stock, two economies with the equal savings rates, depreciation rates and and population growth rates will converge to the same level of economic growth.

Solow considers a firms total output as a function of capital K, labor L and knowledge (technology) A to include the roles played by knowledge to increase labor efficiency. The general production function of neoclassical growth model is;

$$Y= AF (K, L)$$

Where, Y= total income, K= capital, L= labor and A= technology

Technology is independent of both capital and labor inputs to be available in free to all firms and operates by making labor more effective rather than via capital.

The endogenous growth theory which opposes the neoclassical model postulates that economic growth is generated internally in the domestic economy through endogenous factors not through exogenous factors such as technological progress in the neoclassical growth model. According to the endogenous growth theory government policies directed towards market competition and helping stimulate innovation in production process and products, increasing returns to scale from capital investments in education and health and investment in research and developments are main factors which contribute to a nation's economic growth (Pietak, 2014).

There has been a wide debate on the issue of external public debt and economic growth. Three approaches have been used to explain debt versus economic growth; the Keyne sian approach which maintains that debt represents a pillar of economic growth, the liberal approach which rejects the Keynesian hypothesis. From these two approaches, a third approach seems to be emerging, the debt over-engagement approach. Moreover, empirical

work reveals the existence of two types of relationships; the non-linear relationship between public debt and growth, and the linear relationship between public debt and economic growth (Antoine *et al*., 2021).

The objective of grant assistances to developing countries is for the promotion of sustainable economic development and welfare and is measured by its impact on economic growth. However, after decades of aid transfers the effectiveness of grant impacts on economic growth and achieving the objectives remains debatable (Mosley, 1986). Recently a new economic model has been forwarded to examine aid-growth impact within through augmentation of the Fischer-Easterly and Barro models. The hybrid model recommends controlling other determinants of growth while measuring the impacts of grant. Considering the external economic environment, this model also suggests that macroeconomic and policy variables such as optimum grant allocation and other opting for sources of domestic and foreign investment for desirable impact (Durbarry *et al*., 1998).

As can be seen on section 3.4.2., this study used the augmented Solow growth model as the basic concept for the estimation of the effects of external finances on economic growth in Ethiopia. This model states that economic growth is a function of capital accumulation, an expansion of labor force and exogenous factor, technological progress which makes physical capital and labor more productive. In this study the model included four explanatory variables; remittances (R), grants (G), external debt (D) and foreign direct investment (FDI) and RGDP (Y) which is a proxy for economic growth.

2.3. Empirical literature review

The relationship of external finance sources with the economic growth of a given country can be either positive or negative depending on the country context and global economic dynamics. Taking the country context into account, external finance can be a determinant and bring positive impact on economic growth whenever appropriate policy, supporting bureaucracy, absorptive capacity and the investment decisions at which sector the money is spent are in the affirmative side (Mosley, 1986, Tadele, 2013; Asafo-Adjei *et al*., 2021).

Many studies have aimed to examine the developmental impacts of external sources of finance on receiving countries and they suggest mixed outcomes. However, many of them agrees that if the external sources of financing are not used for a productive purpose which is the main problem of developing countries and particularly if debt exceeds a certain limit, it would depress the economy by reducing investment and productivity which would worsen the existing poverty and makes it hard to achieve a sustainable economic growth (Diamond and He, 2014).

Empirical research points out that foreign sources of financing might improve economic grow th through additional foreign exchange inflows, finance physical and human capital investme nts, supporting the establishment of new companies and enterprises, improving the health and educational sectors and reducing macroeconomic volatility. However, there is also empirical evidence of limited effects of foreign remittances on long term economic growth if they are s pent more on consumption than investment and they act as substitutes for productive activity. High levels of external sources of financing particularly remittances and grants can trigger a vicious circle of economic stagnation and dependence known as the “remittance trap ”. Foreign remittances can also lead to a slowdown in economic growth through exchange rat

e appreciation, negatively affecting a country's competitiveness in international trade (Depken *et al*., 2021).

In developing countries, the lack of capital causes a severe challenge on the way to economic growth. A country may finance its capital for economic growth either from internal or external sources. However; in developing countries internally-generated capital may be insufficient because of low level of income which may render saving (Shinde, 1965). Emigration is a very important issue since it determines the inflow of foreign currency in the form of remittances. Inflow of foreign currency is the main remuneration in return to the temporary or permanent loss of labor force or human capital for the emigrant's home country. In most cases emigration is driven by real economic factors such as poverty, unemployment and underemployment, economic stagnation and political situation (De Haas, 2007).

2.3.1. Effects of remittance on economic growth

Some literatures have generally supported the view that external financial resources are a catalyst for development through various channels. Studies that have addressed the effects of remittances on a variety of subjects that could eventually contribute to economic growth, such as reducing poverty and inequality (Akobeng 2016; Yoshino, 2017), financial development (Aggarwal *et al*., 2011), spending behavior (Adams and Cuecu echa, 2010), labor productivity (Azizi, 2018), investment (Le, 2011), and macroeconomic eff ects (Buch and Kuckulenz, 2010).

However, there are also concerns of the growth-hindering impacts of remittances, since an increase in the inflow of remittances can lead to the deterioration of institutional quality, exacerbate corruption, fuel inflation (Abdih *et al*., 2012; Ball *et al*., 2013; Berdiev *et al*., 2013), and reduce labor force participation as receiving households may choose to live on migrants transfer instead of working (Cox *et al*., 2009).

Remittances are reported to impact economic growth depending on the level of financial development (Benmamoun and Lehnert, 2013; Ramirez, 2013; Sobiech, 2019). Specifically, Sobiech (2019) argue that remittance inflows could significantly benefit economic growth in countries with nascent financial system. According to these authors, in a country with a less d eveloped financial market and greater credit constraints, remittances could help as an importa nt source of financing in growth promoting activities and be used in a more productive way. Benmamoun and Lehnert (2013) while comparing the effects of ODA, FDI, and international remittances on receiving countries conclude that remittance inflow is a great contributor of economic growth, especially in countries with a lower income level.

In some cases, the value of remittances received by migrant's country exceeds FDI flows. In this way, migrants even if they no longer produce value in their country or generate direct negative impacts (e.g. Brain drain), they can contribute to the process of economic growth through financial flows and the knowledge imported to their home countries (Goschin, 2014). Data show that countries at an early stage of development reap benefits from remittance which also share a considerable proportion of gross domestic product (up to 10-15%). In such countries, remittances mainly serve as a panacea against high poverty levels by providing finance for investments, financial development, education and healthcare services (Jushi *et al*., 2021). In their analysis they found that impact of remittances is insignificant even though the impact is positive in their analysis of financing growth through remittances and FDI. Sutradhar (2020) also found a negative impact of remittances in economic growth in Bangladish, Pakistan and Srilanka highlighting that most of remittances are used purposes such as consumption. Rao and Hassan (2012) explain the impact of remittances in economic growth using the Solow model; they found that remittances have a positive impact on economic growth.

A study performed by Hajer and Kaouthar (2016) empirically argues that remittances have a negative effect on growth in the short run and a positive effect in the long run. A recent study conducted by Depken *et al*. (2021) suggested that there is a unidirectional causality from remittances towards economic growth but there is no causal link from economic growth to remittances. Remittances increase aggregate demand through an increase in personal consumption and in individual investments by recipients of remittances. Remittances act as a tool for development by stimulating growth through being a substitute channel for investment in developing countries and remains as an important capital flow nowadays (Depken *et al*., 2021).

2.3.2. The effects of grant on economic growth

The proponents of foreign aid argued that developed countries could support developing countries to escape from poverty. According to them; poor countries are facing challenges of inadequate infrastructure, business capital, human capital and poor public institutions. Hence, developing countries demand a seed capital through foreign aid to escape from the poverty trap (Adom, 2015). The poor, especially those in Africa are too poor to accumulate the capital required to escape from the vicious cycle of poverty because of lack of collateral security, weak governance, low productivity, conflicts, poor infrastructure and poverty related diseases (Sachs, 2005).

Murshed and Khanaum (2014) as proponents of aid has claimed that aid has successfully supported poverty reduction and growth and development promotion in many countries by increasing investment, capacity to import capital goods and technology, capital productivity and promoting endogenous technological change. Therefore, it has been suggested as a necessity that developed nations such as USA, European union, Japan and Canada to aid the

poor by donating 0.7% of their GDP to the bottom billions in Africa to provide the much-needed seed capital to escape from the poverty trap (Thomas, 2013).

However, the above argument was criticized by Easterly (2006) and Moyo (2009), which advocate cessation of aid to poor countries since aid has not served the purpose of alleviating poverty and promoting economic growth in developing countries. According to their argument aid has no effect on economic growth and development and should be avoided in the effort for economic growth and poverty alleviation in developing countries. Aid is argued to breed corrupt leadership, inflation, trusteeship, dependency and aid is poorly coordinated in developing countries, which leads to aggravated state of economic deprivation and stagnated development in developing countries (Lawson, 2013).

Opponents of aid further argue that no country has been able to develop through aid since developing countries still lack the necessary institutions and other resources in place for economic growth and development which have to be developed internally to initiate economic growth. The long-term consequences of aid dependency are that the recipient governments tend to be more accountable to the aid provider communities instead of to their own people, which compromises the autonomy and self-determination of a country (Moyo, 2009).

The narratives of both opponents and proponents of aid are inconclusive since promoting economic growth is a multidimensional phenomenon which transcends the provision and acceptance of foreign aid because economic growth involves substantial changes in social structures, social attitude, national institutions and acceleration of economic growth, reduction of income disparity and alleviation of poverty (Todaro and Smith, 2009).

2.3.3. The effect of external debt in economic growth

Economic theories support that a sound amount of external debt will help both developed and developing countries to promote their economic growth. Debt overhang and liquidity constraint theories have been used to understand the growth implications of external debt. Debt overhang means a huge debt burden and the ability of a country for repayment of its external debt is reduced (Diamond and He, 2014). This means that the debt burden is high and all incomes are used to pay existing debt which in turn reduces future new investments and leads to stagnant growth and reduced standard of living with low provision of funds for infrastructure, health and education (Turan and Yanikkaya, 2021).

According to these theories, higher debt levels will hinder economic growth because of the reason that increasing in borrowing will increase interest rate which leads to higher cost of borrowing for investment as well as consumption and crowding effect will occur (Sami and Mbah, 2018). External debt is the main and important sources of finance which is used to support economic growth of a country and fill the gap between government expenditure and domestic savings to achieve national objectives.

In Ethiopia, in the last two decades to achieve robust growth in infrastructure, health, education and other sectors and to alleviate poverty; the government has spent significant amount of resources. Given the limitation in revenue mobilization; external borrowing is required by the government. Hence, foreign loans are a vital financing instrument to bring socio-economic development and to stabilize the economy from external and internal shocks. Central government external debts, non-guaranteed external debts and government-guaranteed external debts are the three types of external debts based on the organization that is borrowing (MOF, 2021). Total external debt in Ethiopia increased at an annual growth rate of 20% from USD 2.3 billion in 2006/2007 to USD 28.6 billion in June 2020 (MOF, 2021).

In Ethiopia, the economy is characterized by saving-investment gap and trade gaps. According to the report of UNICEF, budget deficit of Ethiopia accounts for 20% of the total approved federal budget in 2019/20 fiscal year (UNICEF, 2020). Another report of IMF in its debt sustainability analysis suggests that current account deficit of Ethiopia accounts for 4.5% of GDP of the country (IMF, 2020). This is due to tax avoidance and evasions by business owners. Revenue productivity of taxes is very low and because of inefficiencies and social objectives, profits of public enterprises are negligible for investment. Thus, the government does not have any other choice than external sources of finance to fill the gap between public expenditure and the actual revenue of the country (Atinafu, 2020).

External debt in long-run and external debt stock in the short-run were reported to have a statistically significant and negative relationship with economic growth and whereas debt servicing being statistically insignificant (Atinafu, 2020). Another empirical study shows that external debt stock to GDP and ratio of debt service stock to GDP have a significant negative impact on economic growth both in the long-run and short-run in Ethiopia and confirmed that the debt overhang hypothesis holds true in Ethiopia (Getnet and Ersumo, 2020).

2.3.4. The effect of FDI in economic growth

Foreign direct investment is an amalgamation of a bundle of capital stock and technology that can enrich the existing knowledge and capital capacity in the host economy. Economists assume that FDI plays an important role in economic growth of developing countries by creating business competition to increase productivity and export, increasing employment opportunity and technical know-how in domestic markets (Mohd and Muse, 2021).

African governments particularly in sub Saharan Africa considers FDI as a main priority for economic growth even if it is smaller than other regions (2.9% of worlds FDI) due to low level of infrastructure, social unrest, unstable exchange rate and unexpected inflation.

Although Ethiopia is one of the top FDI recipients of the continent in this decade relative to other countries of the continent, FDI is not sufficient in the country. However, FDI is still reported to play an important role in the economic growth of Ethiopia as a source of knowledge and capital, technical know-how and managerial skills (Astatike and Assefa, 2005). Another study conducted by Tadele (2013) reported that although FDI is having an increasing, the pattern of FDI flow is highly volatile and is highly contracted in the periods of political turbulence mainly in the period of power transitions, in the periods of border war and the 2005 national election.

There are arguments as to why FDI is still scanty in Ethiopia. An economic prospect study conducted by GRIPS (2021) argues that economic development involves a complete transformation in the social system of the population to meet the needs and aspirations of the population. Ethiopian economy is suffering with major challenges that can diminish the economic activities and new and existing investment flows. The GRIPS (2021) study claims that the leading problem is the unfavorable business environment where the deep shortage of foreign currency is the preeminent but there are also other serious inefficiencies and weaknes ses. The next problem is inner political and ethnic conflicts and instability which is increasing in recent years, hindering business activities and depressing investment and business operati ons. COVID-19 pandemic is another problem which is disturbing businesses and hindering ec onomic growth. The leading two problems are Ethiopia's internal problems while the third is a global challenge affecting the whole world and sectors of the economy but in different degr ees. The leading two problems are long-term structural challenges which necessitate significa nt national and organized effort and sufficient time for their solutions (GRIPS, 2021).

According to this report (GRIPS, 2021), FDI inflow is still subtle in both amount and impact t o the national economy in Ethiopia. This is due to the recent history of FDI attraction, which started in the 2010s with an intensive attraction campaign and the construction of modern ind

ustrial parks. It was impressive at the initial stages of the FDI inflow but the subsequent perfo rmance has been less heightened and the inflow began to fluctuate and was not value-creating FDI. The performance of leather products, footwear and light manufacturing and garment re mains limited and stagnant.

For developing countries such as Ethiopia attracting foreign direct investment is one of the po licy pillars of economic development. FDI is supposed to bring numerous benefits to the host economy including creation of employment and income, better management skills, labour trai nings to improve their skills, positive spill overs and linkage to domestic firms, knowledge of global marketing, opportunities to participate in global value chains, and so on. But they rema in potential until the host economy and policy makers prepare required conditions. Sound FD I policies and dynamic domestic labour and business enterprises are required for maximizing the contribution of FDI to the entire national economy (Colen *et al*., 2009).

CHAPTER THREE: METHODOLOGY

3.1. Research approach

In this study descriptive and quantitative research approaches were used to investigate how economic growth in Ethiopia is affected by external sources of finance by using GDP as the dependent variable and remittance, grant, external debt and FDI as independent variables.

3.2. Data type and source

Time series quantitative data were used and it covered for the fiscal year of 1990-2021 G.C. (31 years data) and secondary source of data were used. The data that were used for the study were collected from annual reports of national bank of Ethiopia (NBE), ministry of finance (MOF), World Bank and IMF annual reports.

3.3. Method of analysis

Descriptive and econometric multiple linear regression data analysis methods were used to investigate on the performance of and economic growth effects of external financial sources. Autoregressive Distributed Lag (ARDL) co-integration estimation technique was chosen since it can be applied irrespective of whether the regressors are I (1) and I (0), provides valid and statistically significant results in small sample sizes (Narayan, 2005; Chaudry *et al*., 2009; Nkoro and Uko, 2016). E-Views software was used to compute the regression analysis.

3.4. Definition of variables, theoretical framework and model specification

3.4.1. Definition of variables

RGDP= is the total market value of all final domestically produced products at constant price and real GDP is used as proxy for economic growth (Callen, 2020).

ED= External debts are external sources of finance that are borrowed by governments from foreign bilateral and multilateral creditors to promote economic growth. External debt can aff ect economic growth in a positive or negative way based on whether the external debt is used for productive purpose or not (IMF, 2014; MOF, 2021).

R_t = Remittances are external financial sources that are transferred by migrants to households voluntarily and in a private manner (Shera and Meyer, 2013).

FDI_t= Foreign direct Investments are cross-border investments made by companies that are owned by foreign investors and multi-national companies (Kukaj and Ahmeti, 2016)

$Gt_=$ Grant is the donations of money, goods, or services from one nation to another. Such donations can be made for a humanitarian, altruistic purpose, or to advance the national interests of the giving nation. Grant can be between two (bilateral) or many (multilateral) countries/institutions. Bilateral grant is usually a tied aid (conditional aid) is when recipients must purchase products/ services from the donor country. Multilateral aid is usually untied aid that can be spent in any sector of the recipient country (Bergvall *et al*., 2006).

3.4.2. Theoretical framework

The augmented Solow growth model is used as the basic concept for this study. This model states that economic growth is a function of capital accumulation, an expansion of labor force and exogenous factor, technological progress which makes physical capital and labor more productive. In this study the model included four explanatory variables; remittances (R),

grants(G), external debt (D) and foreign direct investment (FDI) and RGDP (Y) which is a proxy for economic growth. The model is given below:

$$Y = f(R, G, D, FDI)$$

Log log expression of the model specification provides an opportunity to interpret the coefficients directly as elasticity and conciliates the heteroskedasticity problem. Elasticity tells the contribution of each of the explanatory variables to the dependent variable (Santos Silva and Tenreyro, 2006). Expressing the model in its natural logarithm form:

$$LnRGDt = \beta_0 + \beta_1 LnRt + \beta_2 LnGt + \beta_3 LnEXDTt + \beta_4 LnFDIt + Ut$$

(RGDP)t = real gross domestic product at time t

Where; Rt = remittances at time t, Gt = grants at time t, EXDTt = external debts at time t, FDIt = foreign direct investment at time t, Ln=natural logarithm, Ut = error term and

$\beta_0 = \beta_1 = \beta_2 = \beta_3 = \beta_4$=parameters

3.4.3. Estimation Procedure and Hypotheses

Unit root pre-testing of the dependent and independent variables in the model is not a requirement in the autoregressive distributed lag co-integration technique (Pesaran *et al*., 2001). However, to check the validity of the F-statistics proposed by Pesaran *et al*. (2001) for the explanatory variables and ensure whether they are at level, I (0), or at first difference, I (1), but they are not at second difference, I (2) or above a unit root is still essential. In order to determine the extent of stationarity, a unit root testing was carried out by using the Augmented Dicky-fuller (ADF) test.

To determine the long-run relationship between the dependent and independent variables, the ARDL steps are; checking the presence through F-test, estimation and getting the values of the long-run relationship. The short-run relationship between the dependent and explanatory

variables is determined by using the error correction version of the autoregressive distributed lag model in order to detect the speed at which our dependent variable returns or adjusts to the equilibrium due to changes in the independent variables (Pesaran and Shin, 1998).

$$\Delta \text{LnRGDPt} = \beta 0 + \beta 1 \text{LnRGDPt} - 1 + \beta 2 \text{LnRt} - 1 + \beta 3 \text{LnGt} - 1 + \beta 4 \text{LnEDt} - 1 + \beta 5 \text{LnFDIt} - 1 + \sum_{i=1}^{n} \delta 1 \Delta \text{ LnRGDPt} - 1 \ + \sum_{i=1}^{n} \delta 2 \Delta \text{ LnR} t - 1 \ + \sum_{i=1}^{n} \delta 3 \Delta \text{ LnG} t - 1 \ + \sum_{i=1}^{n} \delta 4 \Delta \text{ LnED} t - 1 + \sum_{i=1}^{n} \delta 5 \Delta \text{ LnFDI} t - 1 \ + \varepsilon_t$$

β_1, β_2, β_3, β_4 and β_5, represent the coefficients for the short-run relationship and δ1, δ2, δ3, δ4 and δ5 coefficients show the long-run relationship. The test statistics that was used in unrestricted error correction regression to test the significance of lagged values of the variables is the F-test under the generalized Dickey Fuller regression.

The null hypothesis to be proved or disproved in the above equation is;

H_0: $\beta_1=\beta_2=\beta_3=\beta_4=0$ and, which tells no long-run relationship among the variables

The alternative hypothesis (H_1) is;

H_1: $\beta_1=\beta_2=\beta_3=\beta_4 \neq 0$, which tells there is a long-run relationship among the variables

Pesaran *et al*. (2001) developed two critical values for the two cases which assume that all the variables are either integrated of order one or order zero. Upper and lower bound critical valu es are proposed for all variables. If the result of the computed F-statistics is greater or less than the critical upper bound value one can decide on the null hypothesis no matter whether the variables are co-integrated of order one or order zero. Explicitly, if the F-test result is greater than the critical upper bound value, we reject the null hypothesis which states no long-run relationship and accept the alternative hypothesis which claims existence of long-run relationship. In contrast, if the result of the F-test is less than the upper bound critical value the null hypothesis will be accepted and it can be concluded there is no long-

run relationship between the variables.

Once the presence of long-run relationship among the independent variables and the dependent variable is confirmed, estimation of the long run model was done using the following equation:

$$LnRGDP_t = \beta_0 + \beta_1 LnR_t + \beta_2 LnG_t + \beta_4 LnEXD_t + \beta_4 LnFDI_t + U_t$$

The following standard error correction model was estimated next to the long-run model:

$$\Delta LnRGDP_t = \beta_0 + \sum nj{=}0\ \beta_1 \Delta LnRGDP_{t-i} + \sum n\ j{=}0\ \beta_2 \Delta Ln\mathrm{R}_{t-i} + \sum n\ j{=}0\ \beta_3 \Delta Ln\mathrm{G}_{t-i} + \sum n\ j{=}0 \beta_4 \Delta Ln\mathrm{E}D_{t-i} + \sum n_{j=0}\ \beta_5 \Delta Ln\mathrm{FDI}_{t-i} + \delta ECTt{-}1 + \varepsilon t$$

where β_1, β_2, β_3, β_4 and β_5 denote the short run dynamics coefficients while the ECT is an err or correction term lagged by one period δ. The speed of adjustment towards the long run equi librium after a short-run disturbance is measured by ECT as an error correction parameter whose coefficients are derived from the corresponding long run model by normalizing the equation.

3.4.4. Diagnostic testing and model stability

Normality, serial correlation and Heteroskedasticity coefficient diagnostic tests were performed to investigate the reliability and verifiability of the estimated short-run and long-run models. The overall stability of the short-run and long-un coefficients was checked by CUMSUM recursive residuals and CUMSUM square recursive residuals tests (Pesaran *et al.*, 2001).

CHAPTER FOUR: RESULTS AND DISCUSSIONS

4.1. Descriptive statistics results

4.1.1. The trend of real gross domestic product growth in Ethiopia

As can be observed from the figure 1 below real gross domestic product in Ethiopia was increasing slowly between a year 1990-1999, increases sharply from 1999 to 2000 and increases consistently after that. However, it had been almost constant from 2020 to 2021. The increment in the rGDP, shows Ethiopia has recorded phenomenal economic growth, attributed to the policy measures that have been implemented by the government towards promoting market economy albeit with government interventions on selected sectors (Tekalign, 2020). Growth has been driven by public investments in agriculture and infrastructure as well as expansion of the services and manufacturing sectors (EEA, 2017). The recent decrease could be due to conflict, political instability and the consequences of COVID-19 such as supply chain disruptions (Jayapregasham *et al*., 2018; ADB, 2022).

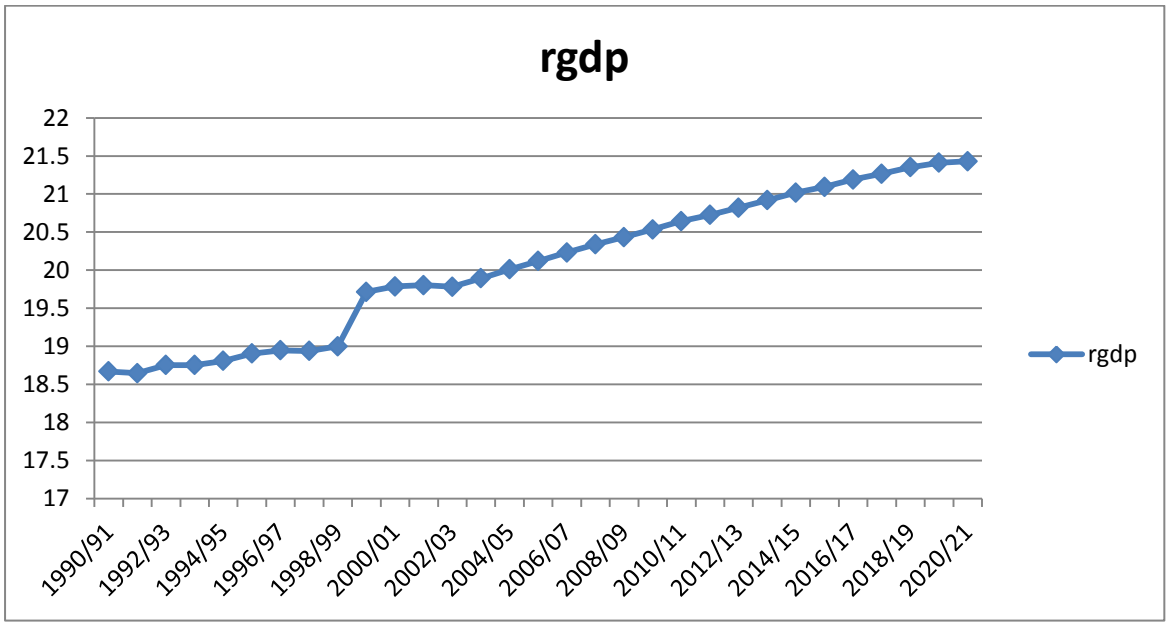

Figure 1: The trend of real gross domestic product growth in Ethiopia
(Source: Authors depiction using data from NBE)

4.1.2. The trend of remittance inflows as a share of rGDP in Ethiopia

As can be observed from figure 2 below remittance inflow in Ethiopia was increasing slowly between 1990-1995, almost constant up to 1997, increases up to 2001 and starts to decrease up to 2003, increasing sharply from 2003 to 2005, decreases up to 2007, sharply increases up to 2009, sharply declines up to 2011 and increases consistently up to 2015 and then starts to decrease sharply up to 2018. However, it had been almost constant from 2018 to 2021. The remittance shows fluctuating behavior because of informal inflow avoiding the formal route due to high cost of formal remittance sending. The informal routes mainly involve sending cash with family and friends or happen on the back of trade payments that are offset without money ever crossing borders. If informal flows were cut, inflows would be substantially higher (Cooper and Esser, 2018). Furthermore in the years 2014-2018 migration of Ethiopians to the Middle East has come under scrutiny because of a number of highly publicized incidents of violence against migrants, particularly women. This led to suspension of migration to Gulf States and return migration. The decline in migration has reduced the remittance receipt (Tsegay and Litchfield, 2019).

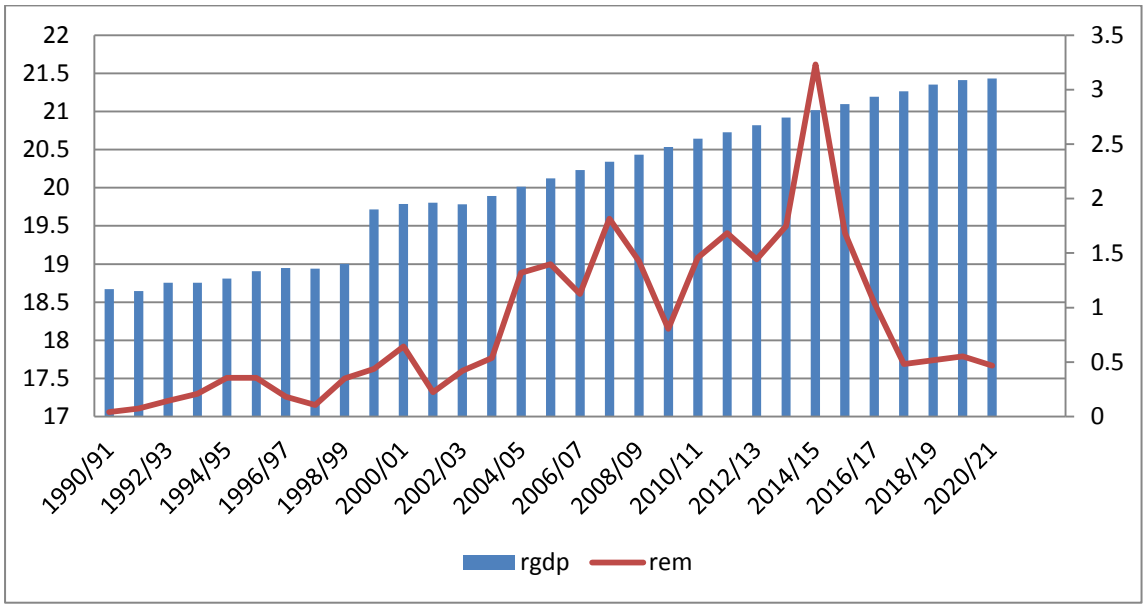

Figure 2: The trend of remittance inflows as a share of rGDP in Ethiopia
(Source: Authors depiction using data from NBE)

4.1.3. The trend of external debt inflows as a share of rGDP in Ethiopia

As can be observed from figure 3 below external debt inflow in Ethiopia was almost constant with slight increase between 1990-2007, increases exponentially from 2007 up to 2021. The external debt of the country has been growing constantly following the benefits of debt reliefs that Ethiopia enjoyed via the heavily indebted poor countries (HIPC) initiative and multilateral debt relief initiative (MDRI). The debt soared basically due to the increase in investment needs of the government for infrastructure development and poverty reduction program. The sharp increase in the level of outstanding external debt was primarily driven by major import intensive public enterprises' new borrowings for implementing infrastructure projects including roads and power generation that require huge foreign currency (AEA, 2016).

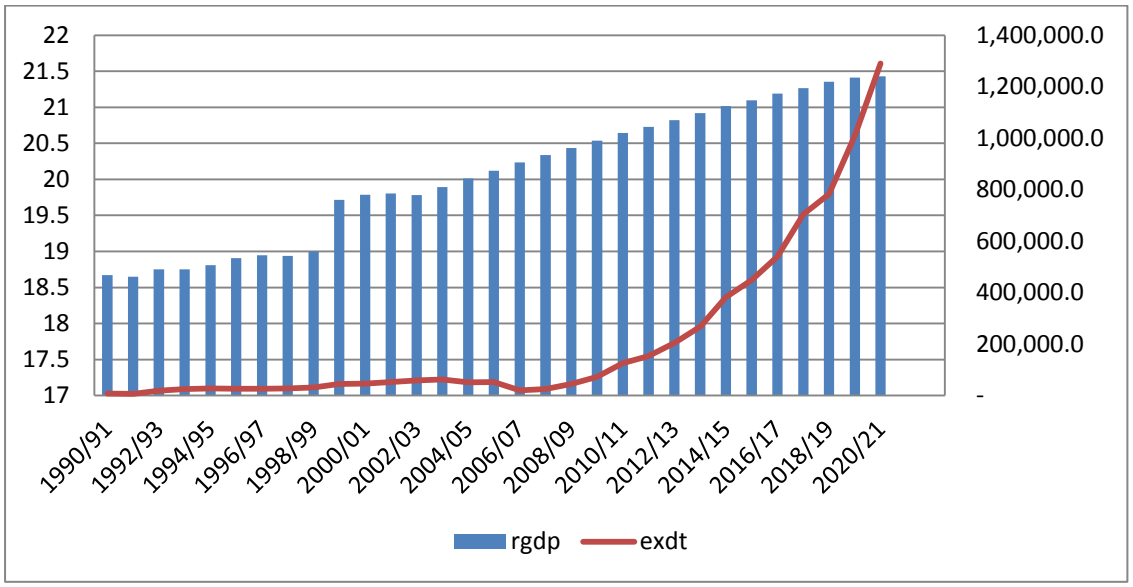

Figure 3: The trend of external debt inflows as a share of rGDP in Ethiopia
(Source: Authors depiction using data from NBE)

4.1.4. The trend of grant inflows as a share of rGDP in Ethiopia

As can be observed from figure 4 below grant inflow in Ethiopia was subtle with slight increase between a year 1990-2005, decreases up to 2007, increases sharply up to 2009, decreases up to 2010, increases up to 2011, decreases up to 2012, almost constant with slight ups and downs up to 2017, increases sharply up to 2020 and then declines sharply up to 2021.

The flow of grant to Ethiopia from bilateral and multinational sources has grown remarkably. The growth in grant flows was fast but not smooth. Grant has gone through periods of ups and downs for various reasons invariably following political developments in the country, for instance there was a notable drop in grant flow following the 2005 disputed election. This shows the vulnerability of the country for grant financing, in particular if there are governance or related political issues over which donors are concerned (Geda and Tafere, 2011). The same justification can be cited for the decline of aid flow again in 2020/21 fiscal year.

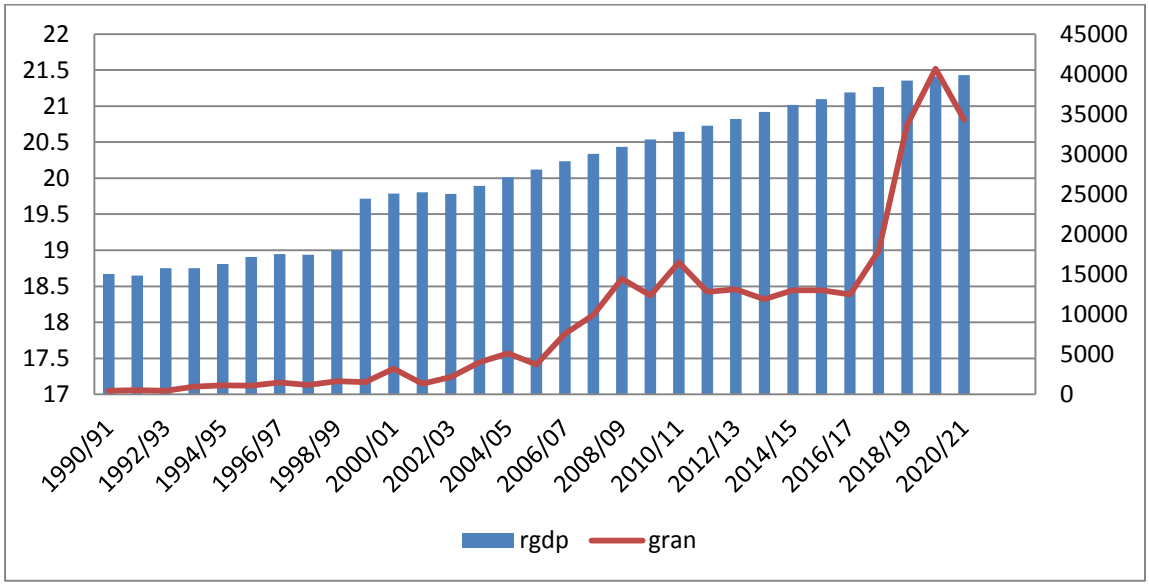

Figure 4: The trend of grant inflows as a share of rGDP in Ethiopia
(Source: Authors depiction using data from NBE)

4.1.5. The trend of FDI inflows as a share of rGDP in Ethiopia

As shown (Figure 5), FDI inflow in Ethiopia was almost zero from 1990 up to 1994, with slight increase between 1994-1997, sharp increase from 1997-1998, constant up to 1999, decreases sharply in 2000, increases sharply up to 2002, decreases up to 2003, increases up to 2004, constant up to 2005, decreases sharply up to 2006, increases in 2007, declines sharply up to 2009, increases up to 2012, starts to decline up to 2013, increases sharply up to 2017 and then declines sharply up to 2021. The overall trend of FDI inflow is increasing, even if there are some sharp decline points. The overall increment is attributed to government measures and efforts to attract FDI to Ethiopia which included policy and other incentives, openness and liberalization infrastructure development and the establishment of industrial parks. On the side of investors domestic and regional market seeking were able to attract FDI (Fikadu and Kumar, 2017; GRIPS, 2021). The sharp declines could be attributed to social unrest and political instability that have resurfaced at those times with recorded decline in addition to corruption, exchange rate volatility and regulatory impediments (Astatike and Assefa, 2005; Gebremariam and Ying, 2021).

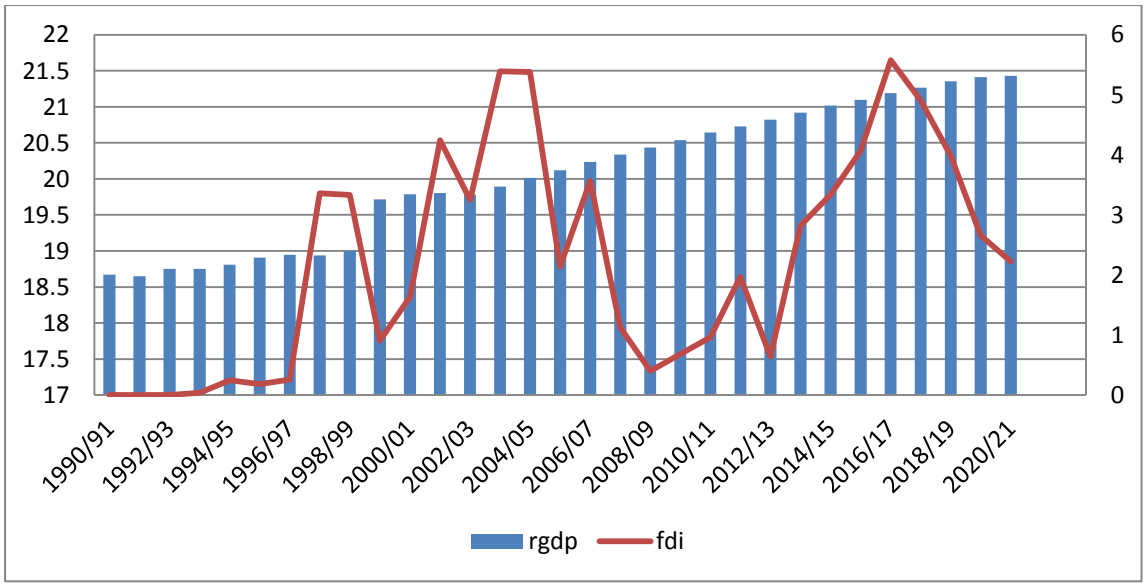

Figure 5: The trend of FDI inflows as a share of rGDP in Ethiopia
(Source: Authors depiction using data from NBE)

4.2. Econometrics model results

4.2.1. Empirical results for unit root testing

It is a pre-condition and necessary to test a unit root test the variables before start running the autoregressive distributed lag model to examine the presence of long-run relationship betwee n the dependent and independent variables in order to check if the data for the variables are st ationary or not. This is done to prevent the occurrence of spurious regression which leads to misleading correlation and hence wrong and unreliable inferences. The result from the Augm ented Dicky Fuller test for the stationarity test indicates that all variables are not stationary at level.

However, all variables after they are first differenced becomes stationary both with and without trend (see table 1) and this implies that all the variables are not integrated of order two or I (2). A variable cannot be stationary at second difference and the result of the Augme nted Dicky Fuller unit root test is one reason for using the autoregressive distributed lag mod el developed by Pesaran *et al.* (2001).

Table 1: Results for unit root test (stationarity test)

Variable		t-test results at first difference [I(1)]	At 5% level of significance	p-value
rGDP	At intercept	5.387	2.967	0.001
	At trend and intercept	5.289	3.574	0.001
Remittance	At intercept	5.940	2.967	0.000
	At trend and intercept	4.993	3.580	0.0021
Grant	At intercept	4.273	2.976	0.0025
	At trend and intercept	4.682	3.587	0.0046
Foreign Direct Investment	At intercept	6.219	2.968	0.000
	At trend and intercept	6.174	3.574	0.0001
External debt	At intercept	4.595	2.967	0.001
	At trend and intercept	4.5	3.57	0.0063

4.2.2. Bounds test for long run relationship

In the ARDL approach, the first step is to test the presence of cointegration or long run relatio nship among the variables. The test for the long run relationship is done using the F-statistic. The lag length which was found optimal for the autoregressive distributed lag model was four. Due to the small sample size the optimal lag was determined using Akaike information criteria. The joint null hypothesis which states that the coefficients of lagged values of the explanatory variables are zero and hence no long-run relationship is tested using the F-value calculated from the regression output.

The calculated F-value was then compared with the upper and lower bounds of Kripfganz and Schenider (2018) critical values. The result from the regression output indicates that the F-statistics is 8.893 which is larger than the critical values of the upper bound at 5% level of sig nificance (Table 5). This indicates there is a sound long-run relationship between log rGDP and the explanatory variables and hence the alternative hypothesis which states the existence of long-run relationship between rGDP and explanatory variables is accepted and the null hypothesis of no long-run relationship is rejected.

Table 2: Results of bounds test for long run relationship

Levels Equation
Case 3: Unrestricted Constant and No Trend

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNREM	0.005831	0.004608	1.265208	0.2745
LNGRAN	0.018520	0.005686	3.256918	0.0312
LNEXDT	0.011014	0.002413	4.565158	0.0103
LNFDI	0.003882	0.001521	2.552252	0.0632

EC = LNRGDP - (0.0058*LNREM + 0.0185*LNGRAN + 0.0110*LNEXDT + 0.0039*LNFDI)

F-Bounds Test — Null Hypothesis: No levels relationship

Test Statistic	Value	Signif.	I(0)	I(1)
			Asymptotic: n=1000	
F-statistic	8.892572	10%	2.45	3.52
k	4	5%	2.86	4.01
		2.5%	3.25	4.49
		1%	3.74	5.06
			Finite Sample: n=35	
Actual Sample Size	27	10%	2.696	3.898
		5%	3.276	4.63
		1%	4.59	6.368
			Finite Sample: n=30	
		10%	2.752	3.994
		5%	3.354	4.774
		1%	4.768	6.67

t-Bounds Test — Null Hypothesis: No levels relationship

Test Statistic	Value	Signif.	I(0)	I(1)
t-statistic	-3.828241	10%	-2.57	-3.66
		5%	-2.86	-3.99
		2.5%	-3.13	-4.26
		1%	-3.43	-4.6

4.2.3. Long-run ARDL estimates

According to the findings of this study all the explanatory variables have a positive effect on economic growth and hence we reject the null hypothesis and accept the alternative hypothesis which supports a positive long-run relationship between the dependent and its explanatory variables (Table 3).

Table 3: Results of Coefficients of Long-run ARDL Estimates

Case 3: Unrestricted Constant and No Trend

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNREM	0.005831	0.004608	1.265208	0.2745
LNGRAN	0.018520	0.005686	3.256918	0.0312
LNEXDT	0.011014	0.002413	4.565158	0.0103
LNFDI	0.003882	0.001521	2.552252	0.0632

EC = LNRGDP - (0.0058*LNREM + 0.0185*LNGRAN + 0.0110*LNEXDT + 0.0039*LNFDI)

The F-statistic result indicated the existence of long run cointegration among the variables (logs of real GDP, external debt, remittance, grant and foreign direct investment). The unit root test results also affirmed there is no a variable which is integrated of order two. The long run coefficients of the model were estimated and results mentioned below.

As can be observed from the long-run ARDL regression result (Table 3), log of remittance has a statistically insignificant but positive effect on log of real GDP. A 0.00583% increase in real GDP can be expected per 1% rise in remittance, keeping other factors constant. This positive effect of remittance on economic growth implies that, the greater the amount of remittance from migrants, the more the economy grows. This result reflects the use of remittance in helping the process of economic growth through providing financial flows for investment, education (human capital), healthcare services and knowledge and skills imported to their home countries and hence support the process of poverty reduction in Ethiopia.

This result agrees with the findings of studies made by Yaekoba (2014) and Tolcha and Rao (2016) for Ethiopian economy, Jushi *et al*. (2021) for Balkan states economy who also founds positive relationship between remittance and real GDP. The results from this study are in contrast with the findings from Lacheheb and Ismael (2020) for low and middle-income countries, Sutradhar (2020) for Bangladish, Pakistan and Srilanka who also found negative relationship between remittance and real GDP.

Log of FDI has a statistically non-significant but positive effect on log of real GDP. Maintaining other factors constant, a 1% rise in FDI projects a 0.00388% increase in real GDP. The greater the amount of FDI from abroad, the more the economy grows faster. The result articulates the roles of FDI in helping the process of economic growth through providing financial flows for new investment projects which brings foreign currency and new knowledge and skills for the host country and creating new employment opportunities then support the process of poverty reduction in Ethiopia. This result agrees with the findings from studies conducted by Mohd and Muse (2021) and Gizaw (2015) for Ethiopian economy, Misikir and Assefa (2013) for Ethiopian economy, Sokang (2018) for Cambodian economy, Adedeji and Ahuru (2016) for Sub-Saharan African Countries and Bouchoucha and Ali (2019) for Tunisian economy who also founds positive relationship between FDI and real GDP.

Log of external debt has a statistically significant and positive effect on log of real GDP. Keeping other factors constant, a one percent increment in external debt implies a 0.011% rise in real GDP. This positive and statistically significant effect of external debt on economic growth implies that external debt supports the process of economic growth in the long-run by filling the gap between saving-investment and trade gaps (MOF, 2021; UNICEF, 2020). This result indicates that using a significant amount of external debt on productive activities and sectors helps to boost future capital investments.

This result agrees with the findings of studies made by Khan *et al*. (2016) for Pakistan economy which founds positive and statistically significant result, Regassa (2017) for Ethiopi an economy who also found positive relationship between remittance and real GDP. The result however is in contrast to findings from Senadza *et al*. (2017) for sub-saharan Africa, Atinafu (2020) for Ethiopian economy and Dey and Tareque (2020) for Bangladish economy who found negative relationship between external debt and real GDP.

Log of grant has a statistically significant and positive effect on log of real GDP. Maintaining other factors constant, a 1% rise in grant implies a 0.0185% increment in real GDP. The positive and statistically significant effect of grant on economic growth in the long-run implies that grant helps the economy to grow and it is important determinant of growth during the study time. Grant supports the process of economic growth by filling the resource gap (saving-investment and foreign exchange gap) if it is used effectively by using efficient and proper policies i.e., if it is used for future productive investments that can add value to the process of economic growth. The result agrees with the findings of studies made by Tadesse (2011) for Ethiopian economy who founds a positive effect of aid on economic growth in the long-run but negative effect in the short-run, Giulia and Emilija (2017) for Ethiopian economy, Yiew and Lau (2018) for 95 developing countries who also found positive relationship between aid and real GDP. But the result disagrees with the findings of studies made by Mwanamanga (2015) for Malawi economy and Fisseha (2007) done on Ethiopian economy who founds a significant negative relationship between aid given in the form of grant and economic growth in the case of intensive growth.

4.2.4. Short-run Error Correction Model

The short-run estimates of ARDL model indicate that (see table 6), unlike that of the long-run analysis, log of external debt has a negative and statistically not significant effect on economic growth (RGDP) at its current value. There is a statistically significant negative

effect on economic growth in Ethiopia when log of FDI is computed versus log of rGDP at its current values in the short-run. This output is inconsistent with the long-run analysis result of the current study. The reason for the statistically significant and negative effect of FDI on economic growth in Ethiopia could be due to weak institutional and bureaucratic quality, low absorptive capacity of the economy. This result agrees with the findings from Tadele (2013) for Ethiopian economy, Ijirshar *et al*. (2019) for 41 African countries.

Log of grant found to have positive but statistically not significant effect on economic growth of Ethiopia in the short-run at its current value and is different to that of the long-run analysis which has positive and significant effect. An increase in real GDP growth rate of 0.0022% can be expected per 1% increase in grant. Log of remittance is found to have positive but statistically not significant effect on economic growth of Ethiopia in the short-run at its current value which is similar to that of the long-run analysis. The estimation result indicates a real GDP growth increase by 0.0033% can be achieved per 1% increase in remittance.

The error correction result shows the extent of disequilibrium corrected from previous years distortions. The result from the regression output is (-1.66) and this indicates the coefficient has a correct sign and is significant. This result indicates that 166% of the disequilibrium fro m the previous year distortions converges back to the long-run equilibrium in the current year which shows a stable long-run relationship between the dependent and explanatory variables.

The most interesting aspect of this short-run result is the negative sign of the ECT coefficient and that it is statistically significant. This is in agreement with the theory and shows evidence of convergence if the long-run equilibrium gets distorted. As mentioned above, the ECT value tells the speed that the model will adjust back to equilibrium. This adjustment will take 0.602 years, which is less than a year (i.e. -1/-1.66=0.602). Since the speed is very fast because of the high ECT value, the period required for adjustment is shorter. In alternative

terms, the lower the ECT value, the longer the period of adjustment could have been, and *vice versa* (Dankumo *et al.,* 2019).

The result from the regression shows goodness of fit of the model and reveals that real gross domestic product is moderately expressed by the explanatory variables. The result for the adjusted R-squared shows that 87.67% of the short-run variation in rGDP is explained by the explanatory variables included in the model.

Table 4: Results of Coefficients of Short-run Error Correction Model

ECM Regression				
Case 3: Unrestricted Constant and No Trend				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
C	4.520725	0.478728	9.443210	0.0007
D(LNRGDP(-1))	0.485616	0.133899	3.626721	0.0222
D(LNRGDP(-2))	0.003450	0.137079	0.025168	0.9811
D(LNRGDP(-3))	0.657615	0.136051	4.833604	0.0084
D(LNREM)	0.003301	0.001436	2.298642	0.0831
D(LNREM(-1))	-0.006577	0.001806	-3.641868	0.0219
D(LNREM(-2))	0.001495	0.001466	1.019586	0.3656
D(LNREM(-3))	0.010066	0.002334	4.313556	0.0125
D(LNGRAN)	0.002195	0.002939	0.746789	0.4967
D(LNGRAN(-1))	-0.005502	0.003297	-1.668833	0.1705
D(LNGRAN(-2))	-0.021911	0.002522	-8.688695	0.0010
D(LNGRAN(-3))	-0.010357	0.002196	-4.716507	0.0092
D(LNEXDT)	-0.005157	0.003518	-1.465891	0.2166
D(LNEXDT(-1))	0.018860	0.004736	3.981904	0.0164
D(LNFDI)	-0.010408	0.001513	-6.878998	0.0023
D(LNFDI(-1))	-0.010062	0.001343	-7.492661	0.0017
D(LNFDI(-2))	-0.004959	0.000855	-5.802149	0.0044
D(LNFDI(-3))	-0.001287	0.000611	-2.107797	0.1027
CointEq(-1)*	-1.660502	0.176086	-9.430044	0.0007
R-squared	0.962077	Mean dependent var		0.004943
Adjusted R-squared	0.876749	S.D. dependent var		0.006655
S.E. of regression	0.002336	Akaike info criterion		-9.089345
Sum squared resid	4.37E-05	Schwarz criterion		-8.177460
Log likelihood	141.7062	Hannan-Quinn criter.		-8.818194
F-statistic	11.27511	Durbin-Watson stat		2.853004
Prob(F-statistic)	0.000801			

4.2.5. Diagnostic testing and model stability

Normality, serial correlation and Heteroskedasticity coefficient diagnostic tests were performed to investigate the reliability and verifiability of the estimated short-run and long-run models. The overall stability of the short-run and long-un coefficients was checked by CUMSUM recursive residuals and CUMSUM square recursive residuals tests (Pesaran *et al.*, 2001). The results (Table 5 and 6) indicated the model is free from heteroskedasticity proble m, does not have serial correlation, is correctly specified and the error term is normally distri buted (Figure 6).

Table 5: Results of Heteroskedasticity Test

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	2.592098	Prob. F(22,4)	0.1836
Obs*R-squared	25.23027	Prob. Chi-Square(22)	0.2862
Scaled explained SS	0.675172	Prob. Chi-Square(22)	1.0000

Table 6: Results of Serial Correlation Test

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	1.211556	Prob. F(2,2)	0.4522
Obs*R-squared	14.79140	Prob. Chi-Square(2)	0.0006

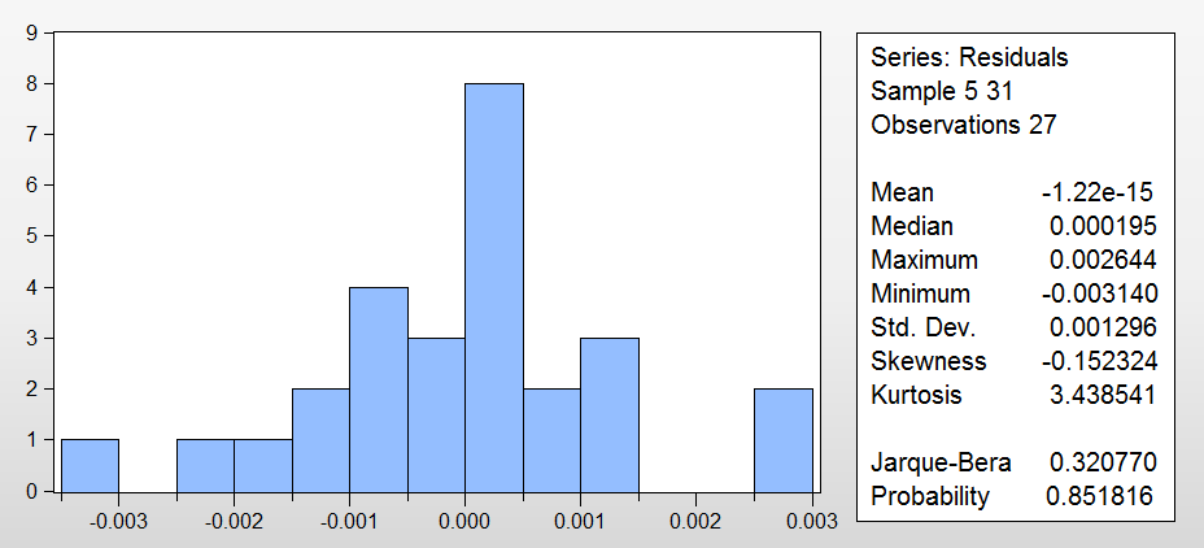

Figure 6: Results of Normality Test

As can be observed from Figures 7 and 8 below, the plots of the cumulative sum (CUMSUM) and the cumulative sum squares (CUMSUMSQ) are placed within the lines proving a correctly specified equation and a stable model. In addition, there is no structural instability in the model. It can be concluded the model is sound to estimate both short-run and long-run relationship between the explanatory variables i.e. grant, remittance, external debt and FDI vis-a-vis the dependent variable real gross domestic product.

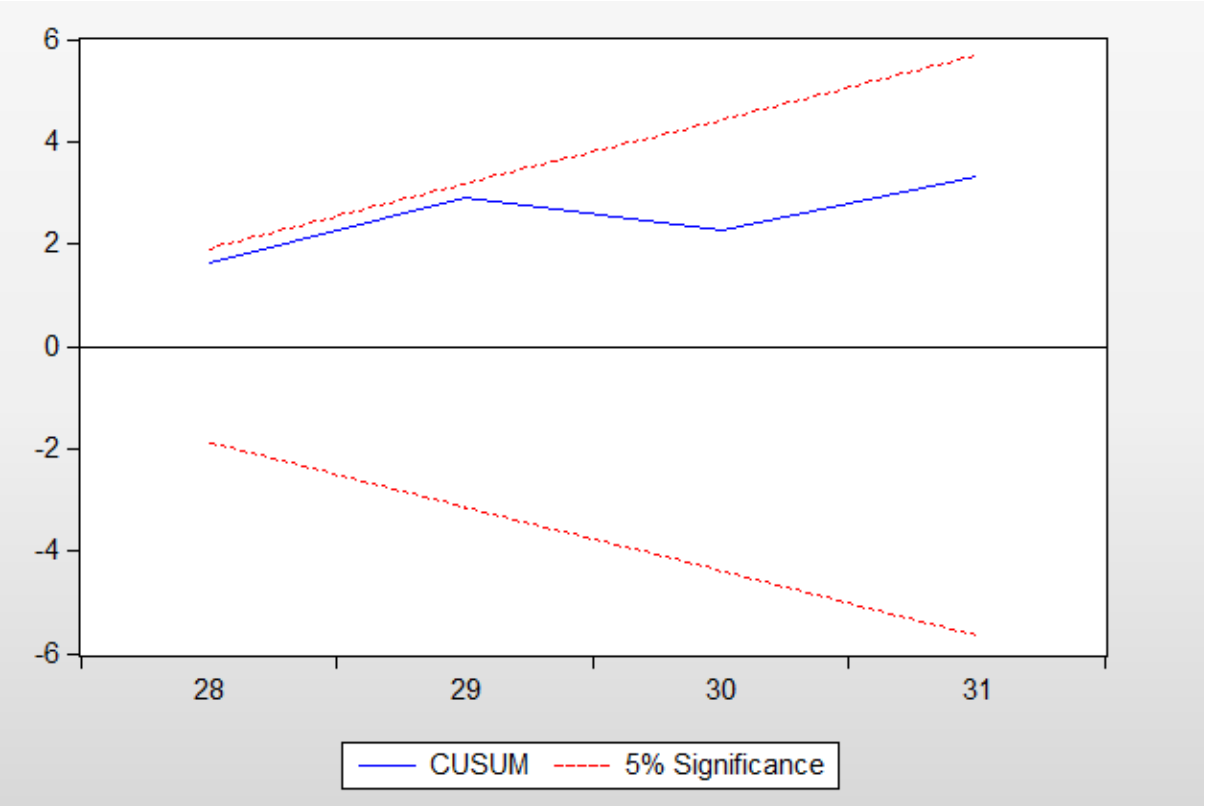

Figure 7: Results of Stability Test 1

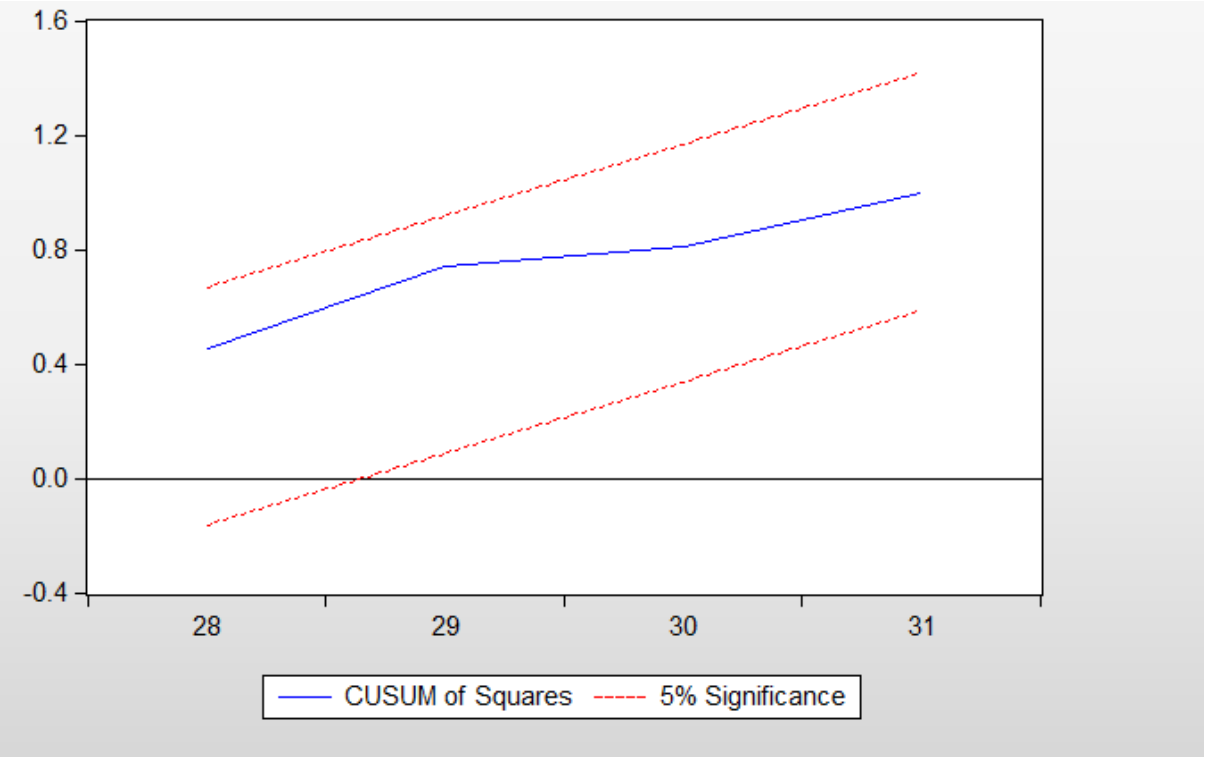

Figure 8: Results of Stability Test 2

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1. Summary

External sources of financing are indispensable to countries such as Ethiopia where there is substantial saving gaps and trade investment gaps. This study tried to measure the performance as well as the effects of external sources of finance on economic growth with the help of descriptive and ARDL modeling approaches. To summarize, the results of the current study has the following key findings. Firstly, results indicate that the effect of external finance on economic growth is positive in the long-run. In the short-run, all variables have positive effects on economic growth except FDI at their current values. However, some results of the study show that there are statistically insignificant variables while they are positive in sign. Mitigation measures are in dire need to improve the efficiency of these external finance sources in favor of economic growth in general. Particular concern from the results of this study is FDI. FDI is believed to be more important for growth than other sources of capital. Macroeconomic studies have revealed that FDI is a whole package of resources that accelerates economic growth through: physical capital, modern technology and production techniques, managerial and marketing knowledge, entrepreneurial abilities and business practices, the creation of employment for unskilled workers and poverty reduction (Colen *et al*., 2009). Measures for attracting FDI and setting the conditions right for investment are necessities to benefit from what FDI can provide to economic growth and consequently development. Appropriate policies and government structure could help to increase the efficiency of external finances as suggested by Burnside *et al*. (2000). It can be generalized that an additional increase in external finance inflow in association with appropriate policy measures, improvement of the absorptive capacity of the overall system

and paradigm shift in institutional issues would result in increasing economic growth as results from this study have indicated that external finance inflows are associated with increasing performance of real gross domestic product which is a key macroeconomic variable.

5.2. Conclusion

This study was conducted with the aim of examining whether and to what extent economic growth in Ethiopia is affected due to external financial sources. The specific objective of this study was to examine the effects of remittance, grant, external debt and FDI on economic growth by using them as explanatory variables and real GDP as dependent variable. To test the hypothesis, ARDL model regression was used. The empirical results have revealed that remittance and FDI has a positive but statistically not significant effect on economic growth while external debt and grant has positive and statistically significant effect on economic growth in the long-run. All the explanatory variables have a positive effect on real gross domestic product in the long-run. From this it can be concluded proper and compatible attention should be given more on encouraging remittance and attracting FDI to increase the effectiveness of the two variables.

In the short-run, remittance has a positive but statistically not significant effect on economic growth at its current value. Grant has a positive but statistically not significant effect on economic growth of Ethiopia at its current value. External debt has a negative and statistically non-significant effect at current value. Foreign direct investment was found to have a statistically significant but negative effect on economic growth of Ethiopia at its current value in the short-run. There is also significant speed of adjustment implying that there is a strong level of adjustment towards long-run equilibrium in the case of any distortions.

5.3. Recommendations

Based on the empirical results and the conclusion above, the following policy implications could be addressed to improve the overall performance of the external finance sources and there by maximize the benefits of external financial sources.

- Stable macro-economy policy and enabling situations should be in place to use external financial resources efficiently.
- Policy makers should encourage domestic savings and investments as major sources of economic growth to compensate the short-run inefficiencies of external finance.
- Institutional and bureaucratic quality should be introduced to improve the short-run inefficiencies of external finances.
- Absorptive capacity of the economy should be improved to maximize the benefits from external financial resources.
- Appropriate and effective monitoring and evaluation systems should be implemented to oversee the spending patterns of external finance so as to increase the effectiveness of external sources of finance and to ensure they are spent on developmental purpose but not on non-developmental purpose.
- Examining what external finance-based projects achieved in their own rights, not what happened to the entire economy as a consequence of the external finances, will better measure the effectiveness of external finance.
- External debt should be managed in conjunction with debt service management strategies to sustain the positive contribution it currently has and to avoid debt overhang that will ha ppen when external debt is mismanaged and hence hinders economic growth.

- Grant funded and associated projects need meticulous monitoring and evaluation follow ups to further increase their contribution to the economic growth and curb misspending and mismanagement which otherwise may limit the contribution of grant for economic growth.
- Further research considering further explanatory variables related to financial management and institutional set up need to be done to further decipher the effect of external finances on economic growth.

6. REFERENCES

Abdih, Y., Chami, R., Dagher, J. and Montiel P. (2012). Remittances and Institutions: Are Remittances a Curse? *World Development*, 40(4): 657–666.

Adams, R. and Cuecuecha A. (2010). Remittances, Household Expenditure and Investment in Guatemala. *World Development*, 38(11): 1626–1641.

ADB (2022). African Economic Outlook. African Development Bank.

Adedeji, G. D. and Ahuru R. R. (2016). Foreign Direct Investment and Economic Growth in Developing Countries: Panel Estimation for Sub-Saharan African Countries. *International Journal of Development and Management Review*, 11: 39-50.

Adom A.Y (2015). Analysis of The Role of Foreign Donor Aid in Ghana's Economic Development and Poverty Alleviation. PhD Thesis; University of South Africa.

AEA. (2016). African Economic Outlook. African Development Bank.

Aggarwal, R., Demirguc-Kunt, A., Soledad, M. and Peria, M. (2011). Do Emittances Promote Financial Development? *Journal of Development Economics*, 96: 255–264.

Akobeng, E. (2016). Out of Inequality and Poverty: Evidence for the Effectiveness of Remittances in Sub-Saharan Africa. *The Quarterly Review of Economics and Finance*, 60: 207–223.

Antoine, N., Stanislas, E.-B., & Rollfe, N. A. (2021). Effects of External Public Debt on Economic Growth: The Case of the Republic of Congo. *Open Journal of Business and Management*, 9: 1997-2012.

Asafo-Adjei E., Boateng E., Isshaq Z., Idun A.A., Owuso Junior P., Adam A.M. (2021). Financial sector and economic growth amid external uncertainity shocks: Insights into emerging economies. *PLoS ONE*, 16(11): eo259303.

Astatike, G. and Assefa, H. (2005). Determinants of foreign direct investment in Ethiopia: a time series analysis. Paper Prepared at the 4th International Conference on the Ethiopian Economy: Addis Ababa, Ethiopia.

Atinafu, W. (2020). External debt-growth nexus: Empirical evidence from Ethiopian economy. *Economics, Management and Sustainability*, 5(2): 6-27.

Azizi, S. (2018). The Impacts of Workers' Remittances on Human Capital and Labor Supply in Developing Countries. *Economic Modelling*, 75: 377–396.

Ball, C. P., Lopez, C. and Reyes, J. (2013). Remittances, Inflation and Exchange Rate Regimes in Small Open Economies. *World Economy*, 36(4): 487–507.

Benmamoun, M. and Lehnert, K. (2013). Financing Growth: Comparing the Effects of FDI, ODA, and International Remittances. *Journal of Economic Development*, 38(2): 43–65.

Berdiev, A. N., Kimb, Y. and Chang, C. P. (2013). Remittances and Corruption. *Economics Letters*, 118: 182–185.

Bergvall, D., Charbit, C., Kraan, DJ., and Merk, O. (2006). Intergovernmental Transfers and decentralized public spending. *OECD journal on budgeting*, 5(4): 111-156.

Bouchoucha, N. and Ali, W. (2019). The impact of FDI on economic growth: evidence from Tunisia. *Journal of smart economic growth*, 4(3): 23-46.

Browne, S. (1990). Foreign Aid in Practice: New York University Press, New York.

Buch, C. M. and Kuckulenz A. (2010). Worker Remittances and Capital Flows to Developing Countries. *International Migration*, 48(5): 89–117.

Burnside, C. and Dollar, D. (2000). Aid, Policies and Growth. *The American Economic Review*, 90 (4): 847-868.

Callen T. (2020). Gross Domestic Product: An economy's all. Economics concepts explained. IMF.

Chaudry, I.S, Malik, S. and Ramazan, M. (2009). "Impact of foreign debt on savings and investment in Pakistan" *Journal of Quality and Technology Management*, 5 (2): 101-115.

Colen, L., Miet, M. and Johan, S. (2009). Foreign direct investment as an engine for economic growth and human development: A review of the arguments and empirical evidence. Leuven Centre for Global Governance Studies, working paper number 16.

Cooper, B. and Esser, A. (2018). Remittances in Ethiopia. Exploring barriers to remittances in sub-saharan Africa series. Volume 4.

Cox Edwards, A. and Oreggia E. R. (2009). Remittances and Labor Force Participation in Mexico: An Analysis Using Propensity Score Matching. *World Development*; 37(4): 1004–1014.

Dankumo, A.M., Ishak, S. and Onisanwa, I.D. (2019). Does Okun's law explain the relationship between economic growth and unemployment in Nigeria? *Jurnal Ekonomi Malaysia*, 53(3), 1-10.

De Haas H. (2007). Remittances, Migration and Social Development: A Conceptual Review of the Literature. UNRSID, Social Policy and Development Programme Paper Number 34.

Depken, C.A., Nikši´ R.M. and Paleka, H. (2021). Causality between Foreign Remittance and Ec onomic Growth: Empirical Evidence from Croatia. *Sustainability*, 13: 12201.

Dey, S. R. and Tareque, M. (2020). External debt and growth: role of stable macroeconomic policies. *Journal of Economics, finance and administrative science*, 25(50): 185-204.

Diamond, D.W. and He, Z. (2014). A theory of debt maturity: The long and short of debt overhang. *The journal of finance*, 69: 719-762.

Domar E.D. (1946). Capital expansion, rate of growth and employment. *The economic journal*, 14(2): 137-147.

Durbarry, R., Gemmell, N. and Greenaway, D. (1998). New evidence on the impact of foreign aid on economic growth. CREDIT Research paper, No 8.

EEA. (2017). Report on the Ethiopian economy. Ethiopian Economics Association, Addis Ababa, Ethiopia.

Easterly, W. (2006). How will greater foreign aid help the poor this time? Heritage Lecture No.950 1-6.

Fisseha, S. (2007). Aid, Growth and Poverty Alleviation in Ethiopia; International Conference on Africa Development Archives, vol.117, 16-24.

Geda, A. and Tafere, K. (2011). Official development assistance (Aid) and its effectiveness in Ethiopia. IAES working paper, A07.

Gebremariam, T.K. and Ying, S. (2022). The foreign direct investment-export performance nexus: An ARDL based empirical evidence from Ethiopia. *Cogent economics and finance*, 10(1): 1-15.

Getnet, B. and Ersumo, F. (2020). The impact of public external debt on economic growth of Ethiopia; The ARDL Co-integration Approach: *Journal of Economics and Sustainable Development*, 11: 25-39.

Giulia M. & Emilija T. (2017) The Fiscal Effects of Aid in Ethiopia: Evidence from CVAR Applications. *The Journal of Development Studies*, 53(7): 1037-1056.

Gizaw, D. (2015). The impact of foreign direct investment on economic growth: The case of Ethiopia. *Journal of poverty, investment and development*, 15: 34-47.

Gohar, M. and Butt, F. (2012). The Impact of External Debt Servicing on the growth of Low-income Countries, Sukkur Institute of Business Administration. *In Proceedings of 2nd International Conference on Business Management.*

Goschin, Z. (2014). Remittances as an economic development factor. Empirical evidence from the CEE countries. *Procedia Economics and Finance*, 10: 54–60.

GRIPS (2021). FDI Policy for Enhanced Value Creation in Ethiopia Situation Analysis and Polic y Proposals. GRIPS Development Forum Report.

Hajer, K., and Kaouthar, G. (2016). Addressing the Effect of Workers' Remittance on Economic Growth: Evidence from MENA Countries. *International Journal of Social Economics*, 43(1): 51–70.

Harrod R.F. (1939). An essay in dynamic theory. *The economic journal*, 49(193): 14-33.

Hongxing Y., Abban O.J. and Dankyi B.A. (2021). Foreign aid and economic growth: Do energy consumption, trade openness and CO_2 emissions matter? A DSUR heterogene ous evidence from Africa's trading blocs, vol.16, e0253457.

Ijirshar U. V., Anjande G., Fefa J. and Mile N. B. (2019). The growth-differential effects of domestic investment and foreign direct investment in Africa. *CBN journal of applied statistics*, 10(2): 139-167.

IMF (2014). External debt statistics: guide for compilers and users. Washington DC.

IMF (2020). The Federal Democratic Republic of Ethiopia. IMF Country Report Number20/29. Washington D.C., USA.

Jayapregasham, S., Schuster, M. and Tjon-A-Meeuw, R. (2018). Evaluating Ethiopia's development progress. *Undergraduate Economic Review*, 15(1): 1-20.

Jushi, Esmeralda, Eglantina Hysa, Arjona Cela, Mirela Panait, and Marian Catalin Voica. (2021). Financing Growth through Remittances and Foreign Direct Investment: Evidences from Balkan Countries. *Journal of Risk and Financial Management*, 14: 117.

Keynes J.M. (1936). General theory of employment, interest and money. Newyork: Harcourt Brace.

Khan, A. A., Rauf A., Haq, M. and Anwar N. (2016). The impact of public debt on economic growth of Pakistan. *International journal of academic research in economics and management sciences*, 5(2): 46-56.

Kripfganz, S. and Schneider D.C. (2018) ARDL: Estimating auto-regressive distributed lag and equilibrium correction models. Proceedings of the 2018 London *STATA* conference. pp.6-7.

Kukaj, H., and Ahmeti F.B. (2016). The importance of foreign direct investments on economic development in transitional countries: a case study of Kosovo. *European scientific journal*, 12(7): 288-305.

Kumar, P.S. and Fikadu, T. (2017). Foreign direct investment growth trends in Africa and Ethiopia. *Research Journal of Economics and Business studies*, 06(09): 44-52.

Kuznets, S. (1955). Economic growth and income inequality. *The American economic review*, 45(1): 1-30.

Lacheheb, Z. and Ismail, N. W. (2020). The Impact of Remittance on Economic Growth in Low- and Middle-income Countries. *International Journal of Academic Research in Economics & Management Sciences*, 9(2): 61-70.

Lawson, M.L. 2013. Does foreign aid work? Efforts to evaluate U.S. foreign assistance. USA: Congressional Research Service.

Le, T. (2011). Remittances for Economic Development: The Investment Perspective. *Economic Modelling,* 28: 2409–2415.

Misikir, M and Assefa, G. (2013). The impact of foreign direct investment in poverty reduction in Ethiopia: a time series analysis. Jimma University 61.

MOF (2021). Macro-fiscal performance in Ethiopia and recent fiscal policy developments. Report Number 4/202.

Mohd S. and Muse, A.N. (2021). Impact of Foreign Direct Investment on Economic Growth in Ethiopia: Empirical evidence. *Latin American Journal of Trade Policy,* 10: 56-77.

Mosley, P. (1986). Aid-Effectiveness: The Micro-Macro Paradox. *Ids Bulletin,* 17 (2): 22-27.

Moyo, D. (2009). Dead aid: Why aid is not working and how there is another way for Africa. England: Penguin Books.

Murshed, M. and Khanaum, M.M. (2014). Impact of foreign aid in the economic development of recipient country. *Journal of the Bangladesh Association of Young Researchers, (JBAYR),* 2(1): 33-37.

Mwanamanga, R. (2015). Does foreign aid promote growth? Evidence from Malawi. Msc thesis, University of Bradford.

Narayan, P. (2005). "The Saving and Investment Nexus for China: Evidence from Cointegration Tests" *Applied Economics,* 37: 1979-1990.

Nkoro, E. and Uko, K.A. (2016). The autoregressive distributed lag (ARDL) co-integration technique: Application and interpretation. *Journal of statistical and econometric methods,* 5(4): 63-91.

Pesaran, M. H., & Shin, Y. (1998). An autoregressive distributed-lag modelling approach to cointegration analysis. *Econometric Society Monographs,* 31: 371-413.

Pesaran M.H., Shin Y. and Smith, R.J. (2001). Bounds testing approaches to the analysis of level relationships. *Journal of applied econometrics,*16: 289-326.

Pietak, L. (2014). Review of theories and models of economic growth. *Comparative Economic Research*, 17(1): 45-60.

Presbitero, A. F. (2012). Total public debt and growth in developing countries. *The European Journal of Development Research*, 24(4): 606-626.

Ramirez, M. (2013). Do Financial and Institutional Variables Enhance the Impact of Remittances on Economic Growth in Latin America and the Caribbean? A Panel Cointegration Analysis. *International Advances in Economic Research*, 19(3): 273–288.

Rao, B.B., and Hassan G.M. (2012). Are the direct and indirect growth effects of remittances significant? *The World Economy*, 35: 351–72.

Regassa, T. E. (2017). The effect of external debt on economic growth of Ethiopia. MA thesis, Makarere University.

Rostow, W. (1956). Take-off into sustained growth. *Economic journal*, 66 (261): 25-48.

Rostow, W. (1961). The stages of economic growth: a non-communist manifesto. Cambridge University Press.

Sachs, D.J. (2005). End of poverty: economic possibilities of our time. New York: The Penguin press.

Sami, A.K. and Mbah S.A. (2018). External Debt and Economic Growth: The Case of Emerging Economies. *Journal of Economic Integration*, 16(1): 1142-1152.

Santos Silva, J.M.C and Tenreyro S. (2006). The log of gravity. *The review of economics and statistics*, 88(4): 641-658.

Senadza B., Fiagbe A. K. and Quarty P. (2017). The effect of external debt on economic growth in sub-Saharan Africa. *International journal of business and economics sciences applied research*, 11(10): 61-69.

Shera, A. and Meyer D. (2013). Remittances and their impact on Economic Growth. *Social and Management Sciences (Periodica polytechnica)*, 21(1): 3–19.

Shinde, S. S. (1965). "External Sources of Funds for the Economic Development of Venezuela". All Graduate Theses and Dissertations. 2836.

Sobiech, I. (2019). Remittances, Finance and Growth: Does Financial Development Foster the Impact of Remittances on Growth? World Development; 113: 44–59.

Sokang, K. (2018). The impact of foreign direct investment on the economic growth in Cambodia: Empirical Evidence. *International Journal of Innovation and Economic Development,* 4(5): 31-38.

Solow R. (1956). A contribution to the theory of economic growth. *Quarterly journal of economics*, 70(1): 65-94.

Sutradhar, S.R. (2020). The impact of remittances on economic growth in Bangladesh, India, Pakistan and Sri Lanka. *International Journal of Economic Policy Studies*, 14: 275–95.

Swan T.W. (1956). Economic growth and capital accumulation. *Economic record*, 32:334-361.

Tadesse, T. (2011). Foreign aid and Economic Growth in Ethiopia: A cointegration analysis. *The economic research guardian*, 1(2): 88-108.

Tadesse, T. and Abafia J. (2019). The causality between financial development and economic growth in Ethiopia: supply leading vs demand following hypothesis. *Journal of Economics and Financial Analysis,* 3(1): 87-115.

Tadele, M. G. (2013). Foreign Direct Investment and Ethiopian economy: a trend determinant and impact analysis. MBA thesis, Mekelle University.

Tekalign, Y. (2020). Ethiopia's economic growth in the context of the Africa rising debate. In: The governance, security and development nexus. pp 237-251.

Thomas, R. (2013). The false God of 0.7: understanding the aid business.

Todaro, P.T and Smith, S.C. (2009). Economic development. USA: Addison-Wesley.

Tolcha D. T. and Rao P N. (2016). The impact of remittances on Economic growth in Ethiopia.

Tsegay, A.H. and Litchfield, J. (2019). Changing patterns of migration and remittances in Ethiopia 2014-2018. Migrating out of Poverty, working paper 59.

Tu, C.A., N.T.M. Phi, L.Q. Tuan, N. Yoshino, T. Sarker, and F. Taghizadeh-Hesary. (2019). Remittance Inflows, Financial Inclusion and Economic Development: An Empirical Analysis of The world Sample. Asian Development Bank Institute Working Paper Series, 1000, Tokyo.

Turan, T. and Yanikkaya, H. (2021). External debt, growth and investment for developing countries: some evidence for the debt overhang hypothesis. *Portuguese economic journal*, 20: 319-341.

UNICEF. (2020). Analysis of the 2019/20 Federal Budget Proclamation. Addis Ababa, Ethiopia.

World Bank (2017). Migration and Remittances. Recent Development and Outlook: Migration and Development Brief 28; World Bank Group.

Yaecoba, T. (2014). The impact of remittance on economic growth and poverty reduction in Ethiopia. MA Thesis: Jimma University.

Yiew, T. H., and Lau, E. (2018). Does foreign aid contribute to or impeded economic growth? *Journal of international studies*, 11(3): 21-30.

Yoshino, N., Taghizadeh-Hesary F. and Otsuka, M. (2017). International Remittances and Poverty Reduction: Evidence from Asian Developing Countries. ADBI Working Paper 759. Tokyo: Asian Development Bank Institute.