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THE EFFECT OF FINANCIAL LIBERALIZATION ON ECONOMIC GROWTH: PANEL DATA EVIDENCE FROM SELECTED IGAD COUNTRIES

BY

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A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF BUSINESS ADMINISTRATION

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STATEMENT OF DECLARATION

I, the undersigned, decided that this is my work and has not been presented for a degree in any other universities and that all sources of materials are used for the project have been duly acknowledged.

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ABSTRACT

Finance nexus growth deep-rooted well in academic discourse. The relationship between both has been hotly debated since 1970 and no consensus is reached. The relationship between financial liberalization policies and economic growth is controversial. Effect of financial liberalization differs among countries. This paper attempts to examine the effect of financial liberalization on economic growth of four selected IGAD countries (Djibouti, Ethiopia, Kenya and Uganda) selection of these four countries out of seven countries in the region is based on availability of the data. The study used quantitative research design. In order to achieve the objective of the study, panel data were used for the period of 2007-2016. Data were analyzed on quantitative basis using descriptive and regression analysis (Ordinary Least Square) method. Fixed effect model was employed in the regression. The obtained result from fixed regression reveled that exchange rate and degree of openness were statistically significant and have positive relationship with economic growth. On the contrary, variables like lending rate and financial deepening were statistically significant and have negative relationship with economic growth. Inflation has positive relationship with economic growth nevertheless it is statistically insignificant. From the result, trade openness would no doubt enhance economic growth and the government in the region has to intensify efforts that provide better financial system.

Keywords: *Financial Liberalization, Economic Growth, Panel Method*

LIST OF ACRONYMS & ABBREVIATIONS

ARDL: Auto Regressive Lag Distribution

CLRM: Classical Linear Regression Model

DW: Durbin-Watson

FD: Financial Deepening

FEM: Fixed Effect Model

GDP: Gross Domestic Product

IGAD: The Inter-Governmental Authority on Development

IMF: International Monetary Fund

INF: General Inflation

LR: Lending Rate

OLS: Ordinary Least Square

REC: Economic Community

REM: Random Effect Model

SSA: Sub Sahara Africa

VAR: Vector Auto Regressive

WDI: World Development Indicators

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CHAPTER-ONE

1. INTRODUCTION

1.1. BACKGROUND OF THE STUDY

From historical perspective liberalization is not new phenomena but due to its huge long run impact in an economy of a country, today it is a current issue and assessed in depth. Liberalization in developing countries are face up and in relation to trade liberalization in recent decades financial deregulation and liberalization of private capital movement in developing countries are also a rising issues. Financial liberalization refers to deregulation of domestic financial markets and liberalization of capital account. It can be understood as integration among cross countries. Capitals move freely across countries and local borrowers and lenders meet in the international market via international intermediaries.

These days' countries are expected to liberalize their economy and financial sector to be part of world trade organization so as to integrate with the world. Financial liberalization takes place in three principals of financial liberalization. These are: domestic financial reform (Gelos, 2002); stock market liberalization (Bekaert, 2001) and capital account liberalization (Kaminsky, 2001). Hence, many countries have made attempts to liberalize their financial sector by deregulating interest rates, eliminating credit controls, allowing free entry into the financial sector especially in banking sector. However, after following liberalization some countries practice positive effect to economic while others may experience financial fragile and unstable markets.

Financial sectors play a vital role in an economy of a country. They facilitates payments, mobilize saving and allocates funds for the most productive uses. Financial institutions allocate funds for highest value use, limit risks and costs and generate economic activities (Levine R. , 1997). Therefore, it is clear that the concern of financial sector is essential for growth of a country and financial development is crucial for economic growth as well as economic development. However, financial and economic growth is on ambiguity. Financial development and economic growth is two side of a coin. In the first view, financial development and economic growth is achieved though financial liberalization. While in the second view, financial regulation is the way to achieve economic growth.

As per supporters of financial liberalization, financial liberalization increases competition among banks and increases profit, the increase in competition among banking markets will increase interest rate on deposit, which leads to higher saving rate. As a result, amount of resources available for investment increase and enhance economic growth (Mckinnon R. , 1973).

On the other hand, supports of financial repression states that financial liberalization leads to crises due to problem of asymmetric information (Stiglitz, 2000). Competition in financial market leads decrease in profit and increase financial fragility of financial intermediaries in (Stiglitz, 2000). Liberalization generates economic growth and it is in the short run but has not intensified in the long run (Akapan, 2004). In addition, (Akapan, 2004) also states that liberalization leads to risks and macroeconomic instability. There are also practical example countries which experience negative effect of financial liberalization. For instance, Chile and Argentina in 1980, Mexico in 1995.

From the above discussion it is clear that there is no clear point of view that whether financial liberalization through financial development boosts economic growth or repression of a financial sector enhances economic growth. However, studies are done on the issue of financial liberalization and economic growth still there exist conflicts among financial liberalization nexus economic growth. In addition, studies don’t give much emphasis on the case of IGAD countries. Therefore, the purpose of this study is to examine the effect of financial liberalization on economic growth of IGAD countries from 2007-2016. The study will be important by providing policy recommendations to the rest of countries that are looking to liberalize their financial sector by giving insight weather financial liberalization has significant and positive effect on economic growth or not.

1.2. BACKGROUND OF IGAD COUNTRIES

IGAD is a Regional Economic Community (REC) in Eastern Africa. It was launched during the 5th IGAD Summit held in Djibouti on 25-26 November 1996 by embracing the regional countries namely; Djibouti, Eritrea, Ethiopia, Kenya, Somalia, Sudan and Uganda[1]. The Inter-Governmental Authority on Development (IGAD) as one of the relatively newly constituted Regional block is composed of diverse countries with varied economic structures and agro-ecological zones. Member states (that includes Djibouti, Eritrea, Ethiopia, Kenya, Somalia, Sudan and Uganda) also vary in terms of population sizes ranging from the second most populous country in Sub-Saharan Africa (Ethiopia) to a country with a population of less than a million (Djibouti). The region is characterized as young population.

The economies of IGAD member countries are varied. Some are making significant progress towards maintaining a sustainable growth (Djibouti, Ethiopia, Kenya and Uganda) performed better than the African average while others are in the progress of recovering from political instability impacting their economic growth (Eritrea, Somalia and Sudan) was experienced worse of average.[2]IGAD is an agrarian region in which agriculture, including both crop and livestock production, remains the backbone of the economy. Employing an overwhelming majority of the population, and contributing almost half of the overall GDP, exports of agricultural (primary) commodities still constitute more than 60 percent of export earnings. The opportunity for the expansion of agricultural products and livestock remains untapped. With an estimated livestock population of hundreds of millions, the IGAD region has not made adequate use of its resources.

Macro-economic performance of member countries shows roughly similar picture in which Ethiopia, Sudan and Uganda performed better than all SSA average while the remaining countries lagged behind. According to the horn economic and social policy institute 2017 report[3], growth of money in most countries has exhibited a stable growth rate. In particular the growth rate of money in most countries showed a spike in some years while declined a negative to territory in others. For instance, as indicated by IMF outlook (2016) money supply of Ethiopia in 2007 was -13% and move to 23% in 2008. Again in this outlook, Djibouti of money supply in

[1]https://hornaffairs.com/the-political-economy-of-igad/
[2]https://data.worldbank.org/products/wdi
[3]https://www.africaportal.org/documents/18006/Macroeconomic-Performance-of-IGAD.pdf

2010 was 12% and move to -4.5% in 2011. However, Kenya and Uganda shows relatively stable money compared to other countries in the region.

In recent years, countries from the region are practicing financial liberalization. At the beginning of the financial liberalization, many African countries had to increase their interest rates and free their exchange rates. These policies encouraged capital flows and investment, which later increased economic growth and credit in most countries. For instance, Kenya practiced interest rate liberalization during 1991 (Pill, 1997) and allows full financial liberalization during this year. Uganda also practiced interest rate liberalization in 1992 (Nachega, 2001). As a result, financial liberalization is not new phenomena for the region. Therefore, the current study focused on the effect of financial liberalization on economic growth in the region.

1.3. STATEMENT OF THE PROBLEM

IGAD countries are considered as among less developed financial sector. Financial sector was used by governmental intervention. However, there are countries that allow financial liberalization in the region. For instance, Kenya allows full financial liberalization in 1991 through allowing interest rate liberalization (Pill, 1997). Uganda also liberalizes interest rate in 1992. Therefore, financial liberalization is not new in the region but financial liberalization can be looked upon as an accelerator of the economy through the development of the financial sector or might retarded the economy via distorting the financial sector. Since, it is evident from the background of this thesis; the issue of effect of financial liberalization on economic growth is questionable.

Liberalization was theorized to accelerate economic growth and enhance efficiency through modestly positive real interest rate which is aroused from competition among banks and this competition will lead the market offering competitive return for savers (Tokit, 2005). Therefore, it attracts saving and demand deposits. The positive real interest rate also enhances investment and productivity in the economy (Banam, 2010). In addition, there exist knowledge spillover, technological advancement and competition among industries is a good opportunity for service as well as wage rate improvement in the industry. These will create improvement in the financial sector; development of financial system. So that, better financial system leads to better functioning of financial institutions efficiently and promote economic growth (Mckinnon, 1973).

While, the other round, financial liberalization also has come up with its own limits. The entry of financial banks may create persistent market segmentations, competition may come up with its negative sides by engulfing the domestic financial institutions. Because of, domestic financial sectors are infants in the industry compared to the international financial intermediaries. As a result, they might be extinct and every opportunity as well as returns will go to international financial intermediaries. After liberalization the market will also be sensitive to foreign shocks, business cycles and investors responses are elastic to small change of risk and return due to symmetrical information. So in short, there might be crises, co-integration of risks and once liberalization occurred the country may also be left with less policy instruments (Munir, 2010). Liberalization has no significant effect rather it leads to distortion of credit allocation in good turn of consumption (Achy, 2003). There are also empirical evidences that shows some countries are revealing practical evidence of the demerits of financial liberalization like the cases of the 1997-1998 Asian[4] and Russian crises, as well as those in Brazil 1999, Ecuador 2000, Turkey 2001, Argentina 2001, and Uruguay 2002 are just some examples that captured worldwide interest.

As discussed in the aforementioned paragraphs there is inconsistency of theories on the issue of effect of financial liberalization and economic growth theories. Waving through records, one can find that an extensive amount of empirical investigation have been conducted, aimed at testing the conflicting theoretical developments mentioning using different technique. The researcher finds that the empirical studies done on this issue are also inconsistent. The researcher believes that researches were conducted on finance nexus growth by using either time series or cross-section analysis. Study such as (Garedachew, 2011) viewed sequencing of the financial liberalization qualitatively, while (Kashaye, 2014) focused on the banking sector liberalization on economic growth; sequencing and timing process and assess performance indicators using ARDL co-integration approach. (Temesgen, 2016), conducted the casual relationship between financial development and economic growth in Ethiopia. The result indicates that casual effect of financial development to economic growth is more than economic effects to the financial development. The effect of financial development in sub-Sahara countries was addressed by

[4]The Asian financial crises: Many countries were badly hit during these crises. The growth rate stumbled and the economy collapsed for the crisis-hit countries which leads to an interesting question on how financial liberalization can affect long-run economic growth

(Yohannes, 2016). The effect of financial liberalization on economic development of Ethiopia has been covered by (Omar, 2016) using ARDL approach. However, works are done on this issue; no consensus has been reached. In addition, the empirical studies obtained on the issue of finance nexus growth are inconsistent. For instance, (Okapara, 2010) studied the effect of financial liberalization in Nigeria and found that financial liberalization has positive and statistically significant effect on economic growth. (Asamoah, 2008), examine the effect of financial liberalization in Ghana. The result reveled that financial liberalization has positive and statically significant effect on economic growth. (Omar, 2016), showed that financial liberalization has positive effect on economic development of Ethiopia. However, (Achy, 2003), in his findings stated that financial liberalization has negative and statistically significant effect in MENA countries. (Foluso, 2017), examined the effect of financial liberalization in 30 Sub-Sahara countries. The result showed that financial liberalization has positive and statistically significant effect on economic growth nevertheless for low income countries it has negative and statistically insignificant relationships. Large body of historical records summary has provided readers with crystallized history of both the theoretical and empirical findings on the linkage between financial liberalization and economic growth. Disaggregating both historical and theoretical facts from the literature, the notation has become appealing (1) the growth theories in general macroeconomics have regained popularity; (2) results from studies in the area have diametric conclusions. Therefore, the researcher evaluates the effect of financial sector liberalization on economic growth by considering IGAD countries. In order to, fill ambiguity of empirical findings. In addition, much emphasis was not given to IGAD countries. The study is believed to contribute in showing a will focused and profound analysis of the effect of liberalization on economic growth and what other variables do really have a significant effect in relation to economic growth. The researcher also believes that, the research will contribute as an input for future studies and it provides possible recommendations.

1.4. OBJECTIVE OF THE STUDY

The general and specific objectives of the study are set below.

1.4.1GENERAL OBJECTIVE

The general objective of this study is to examine the effect of financial sector liberalization on economic growth and what other variables significantly affect economic growth, in the context of IGAD countries. In due course of achieving this paramount objective the following specific objectives are expected to be achieved.

1.4.2 SPECIFIC OBJECTIVES

Specifically the study tries to achieve the following objectives.

- To examine the effect of exchange rate, on economic growth.
- To analyze the effect of lending rate on economic growth.
- To evaluate the effect of financial deepening on economic growth.
- To evaluate the effect of degree of openness on economic growth.
- To analyze the effect of inflation rate on economic growth.

1.5. RESEARCH HYPOTHESES

In line with the broad purpose statement the following hypothesis are formulated for investigation. Hypotheses of the study stands on the theories related to economic growth and financial liberalization that has been developed by researcher's and past empirical studies related to economic growth. Hence, based on the objective, the present study tested the following hypotheses:

Ho: There is no significant and positive relationship between exchange rate and economic growth.

Ho: There is no significant and negative relationship between lending rate and economic growth.

Ho: There is no significant and negative relationship between inflation rate and economic growth.

Ho: There is no significant and positive relationship between financial deepening and economic growth.

Ho: there is no significant and positive relationship between degree of openness and economic growth.

1.6. SIGNIFICANCE OF THE STUDY

The study attempts to examine the effect of financial liberalization on economic growth in a sample of selected IGAD countries and makes some implications on whether the policy should focus on financial liberalization or repression of the financial sector. Beyond this, the paper add on the existing literature which will be used as reference by various academicians for further research conduction on this topic and other related issues. The research finding also contributes to the ongoing academic debate about the contradictions of financial liberalization or financial repression for economic growth theory.

1.7. SCOPE AND LIMITATION OF THE STUDY

The study is limited to the effect of financial liberalization on economic growth of Selected IGAD countries. The total sample size of the study is four countries that have ten years of data from 2005-10016.

Even if there are seven IGAD country members in the region, only four countries were selected (i.e. Djibouti, Ethiopia, Kenya and Uganda) were used as a sample, because the other three countries (i.e. Eretria, Somalia and Sudan) don't have ten years data for the study.

In this study, financial deepening was used as a measure of financial liberalization. The reason for using financial deepening as a measurement of financial liberalization was because financial deepening reflects the availability of liquid money in the countries. The study only looked five independent variables that affect economic growth of the countries (i.e. exchange rate, inflation rate, financial deepening, degree of openness and lending rate). Economic policies were not included in this study.

1.8 ORGANIZATION OF THE STUDY

The rest of the chapters are organized as follows;

The first chapter comprises overview of the study by including the introduction, background of the study, statement of the problem, hypothesis, objective of the study, significance of the study, and how the study were organized. The second chapter presents a brief review of the historical, theoretical and empirical literature on the relationship between finance and economic growth. It is about review of related literature. Under chapter three, detailed methodology including data type source and variables with their definitions are presented. Chapter four deals with descriptive analysis, econometric analysis and presents finding of the analysis. The last chapter provides conclusion and recommendation.

CHAPTER TWO

LITERATURE REVIEW

The chapter presents a review of the literature related to the study. Past studies are important as they guide the researcher on other studies on the same topic. The literature review provides an explanation of theoretical rationale of the problem being studied as well as what research has already been done and how the findings relate to the problem at hand. This chapter discusses historical review, theoretical review, empirical review and research gap of the study.

2.1. HISTORICAL REVIEW OF LITERATURE

The early intellectual development of finance nexus growth can be traced back to the 17th and 18th century, where the earlier literatures, such as John Locke, Adam Smith and Jeremy Bentham, had advocated the liberal attitude of finance that sound money and unrestricted financial intermediation are beneficial to society. In the 19th century literatures contribute the importance of banking system, and

highlighted scenarios where banks could foster innovations and future growth by identifying and financing productive investment (Arestis, 2005). In the 20th century essential and integral part of financial development on the process of economic development was explicitly emphasized as financial institutions are a key agents in this process, as they evaluate and finance entrepreneurs in their initiation of innovation activities and bring new product to market, which is the central process of economic growth (Fry, 1995), (Levine K. a., 1993a) and (Schumpeter, 1911).

2.2. THEORETICAL LITERATURE REVIEW

2.2.1. AN OVERVIEW OF FINANCIAL LIBERALIZATION

A Well-grounded economy is mainly characterized by efficient and stimulating financial market. Regulation mainly characterized by imperfect information, regulatory impediments and artificial structures. Before world war the first there is almost absence of restrictions on across border capital flows, after the war many countries exercise with capital controls which varies in nature and intensity. Now, due to globalization, liberalization is taking place the gradual lifting of restrictions. Although there has been a gradual lifting of restrictions over time, there were periods of reversals, in which restrictions were re-imposed. The most substantial reversals took place in the upshot of the 1982 debt crisis, in the mid-1990s (Stiglitz, 2000).

Most countries are financially repressed. Repression[5] is marked by regulation of interest rates, credit controls, restriction on free entry into the financial sector especially in banking sector, insufficient resource mobilization, high transaction costs and asymmetric information (Folawewo, 2009). Financial liberalization policies are introduced to correct the deficiency in financial system in countries to induce financial depth and economic growth. Some African countries, including Ghana, Mauritius, Botswana, Côte d'Ivoire, Nigeria, Kenya and South Africa, implemented interest rate liberalization policies (Stiglitz, 2000).

2.2.2. FINANCIAL LIBERALIZATION THEORY

In the development of financial and economic theories there are two sides. In one view, financial development is a major determinant of economic growth. According to advocates of this views (Mckinnon, 1973),(Shaw, 1973) and (Fry, 1995) financial development play a key role in the process of economic growth. Liberalization system is helpful to mobilize and increasing volume of saving, productive investment as a result economic growth increase. By the same taken they advocate that repression of financial system reduce saving rate, inefficient financial intermediaries, low facilities for credit there by economic growth will be retarding. They also

[5] Financial repression is a combination of rationing of bank credit or foreign exchange, accelerating, inflation, reserve requirement and the nominal interest rate ceiling, in order to direct resource allocation and to direct resources allocation and to act as a discriminatory tax on financial system (Honohan, 1992)

argue that state intervention in formal market leads to repression and low economic growth. While, the second view or opponents, (Keynes, The general theory of Employment, interest rate and money , 1930) propose that, due to inherent instability of financial system financial development is an obstacle for economic growth and believes that the role of government intervention is vital for working of financial market.

Financial liberalization refers to the process to liberalize financial sector of a country with an aim to create a favorable environment to increase the money demand of the economy. This assumed to takes place in two ways: 1) by increasing the financial resource to lead the supply-induced demand for money, 2) by creating suitable environment to make investments in the economy. Financial liberalization may affect growth in three mechanisms. First it may affect the development of domestic financial system in terms of size and efficiency, second it may affect the access of domestic firms to foreign funds and thirdly it may reduce agency problems improving corporate governance.

The initial framework of (Mckinnon, 1973) and (Shaw, 1973) focused on financial repression and the need to alleviate financial repression by allowing the market to determine real interest rates, removal of credit control among others. They postulated that when interest rate is liberalized, it will lead to increase in saving, stimulate investment and in due this economic growth will be achieved. They also believe that the outcome of repression is the reverse low saving, high consumption, low investment and stunt economic growth. Thus, McKinnon–Shaw framework argues that in order for an economic growth, financial restriction should be removed.

(Shaw, 1973), proposed the “debt-intermediation hypothesis” whereby expanded financial intermediation between savers and investors resulting from financial liberalization (higher real interest rate) and financial development increases the incentive to save and invest, stimulates the investment due to increased supply of credit and increased level of average efficiency of investment. Here, investment (I) is a decreasing function of real interest rate (r) and the saving is an increasing function of economic growth rate (g) and real interest rate (r).

Liberalization would result in an expanded, improved and integrated financial sector that would lead to an increase in the savings rate, an increase in the rate of investment (by facilitating more investment); and a direct enhancement to growth by improving financial technologies. Hence, (Shaw, 1973), viewed financial liberalization as: Market-determined interest rates; Greater ease of entry into the banking sector to encourage competition; the elimination of directed credit programs; reduced fiscal dependence of the state on credit from the banking system; the integration of formal and informal markets; a movement towards equilibrium exchange rates and, eventually, flexible exchange rate regimes with open capital accounts.

In financial liberalization theory, deregulating the domestic financial market and allowing the market to define the interest rate and controlling the capital that will help in macroeconomic stability and economic growth of countries. (Mckinnon, 1973), and (Shaw, 1973) revels that financial liberalization can promote economic growth by increasing investment and productivity. Furthermore, financial liberalization could be beneficial if it results in: Greater savings; Reduction in cost of capital; and adoption of improved governance practices. Theoretically, financial liberalization is expected to lead higher real interest rates and to stimulate savings; In return, a higher level of savings would be expected to finance a higher level of investments, therefore, leading to higher economic growth.

Financial liberalization crucially depends on the assumption of perfect information and perfect competition. According to (Fry, 1995) there are five prerequisites for successful financial liberalization:1) Adequate prudential and supervision of commercial banks, implying some minimal levels of accounting and legal infrastructure; 2) A reasonable degree of price stability; 3) Fiscal discipline taking the form of a sustainable government borrowing requirement that avoids inflationary effects; 4) Profit-maximizing, competitive behavior by the commercial banks; 5) A tax system that does not impose discriminatory explicit or implicit taxes on financial intermediation.

Theoretically different approach applied in investigating the role of finance on economic growth. A wellbeing financial system contributes to economic growth through technological advancement. Despite, countries differ in their political history; economic structure; institutional arrangements; level of financial development and role of financial institutions from theoretical perspectives finance play a great role for economic growth. In contrast, (Robinson, 1952) argues that financial liberalization and financial development is the result of improvements in economic performance. In view of that, there is distinguishing between supply lead and demand following hypothesis. In demand following phenomenon, lack of financial growth is a manifestation of lack of demand for financial service. This means, real sector determines the level of financial development. In supply leading condition, financial sector precedes and induces real growth by channeling scare resources. There is also third view on empirical front, contends that economic growth and financial development have bi-causal relationship[6].

Financial liberalization is taking apart of regulatory controls over institutional structures, instruments and activities of financial sectors. These can relate to internal and external regulations. So it can be said that financial liberalization is elimination of controls that restrict financial activities and allowing the market forces (interplay of the forces of demand and supply) to serve as the price mechanism for financial services. In broader concept, financial liberalization consists of the deregulation of the foreign sector capital account, domestic financial sector, and the stock market sector viewed separately from the domestic financial sector (Schmukler, 2001). From this definition, full financial liberalization occurs when at least two of the three sectors are fully liberalized and the third one is partially liberalized. Therefore, financial liberalization as a set of operational reforms and policy measures designed to deregulate and transform the financial system and its structure with the view to achieve a liberalized market-oriented system within an appropriate regulatory framework.

Principally there are three types of financial liberalization. The first principal type of financial liberalization described as domestic financial sector reforms such as privatization and increases in credit extension to the private sector (Gelos, 2002), In the second principal type; financial liberalization may be used to refer to stock market liberalization. Here, stock market liberalization occurs when a country opens up its stock markets to foreign investors, at the same time allowing domestic firms access to international markets (Bekaert, 2001). The last principal type of financial liberalization refers to the liberalization of the capital account; Liberalization of capital account is captured by the regulation on offshore borrowing by financial institutions and non-financial operations, on multiple exchange rate markets and capital outflow controls. In fully liberalized capital account regime; banks and corporations are allowed to borrow freely.

[6] Where finance leads growth (supply-leading hypothesis), finance follows growth (demand following hypothesis), or where the real financial sector influences each other mutually (bidirectional causality) see (Chaw, 2008)

Several studies have addressed the potential links between financial development and economic growth (Levine R. , 1997). The links between financial intermediation and economic growth focuses on the key functions of financial systems. These includes: acting as effective instrument for channeling funds from surplus units to deficit units, transform maturity of the portfolios of savers and investors, risk reduction through diversification. By doing so, financial system may spur economic growth. However, in spite the fact rapidly growing literature, the debate regarding the effect of financial liberalization on the development of financial intermediaries in economic growth is far from settled. The wave of new theoretical models on the relationship between financial development and economic growth has prompted new empirical interest into the relationship between finance and growth (Levine K. a., 1993a).

2.2.3. ECONOMIC GROWTH THEORIES

2.2.3.1. THE CLASSICAL ECONOMIC THEORY

According to this theory the relationship between of money and price level is explained in terms of the quantity theory of money. Classical theory of money explained that price level is a function of the supply of money. In this theory they assumed that there is full employment in the economy and unemployment occurred due to rigidity of money wages. This theory argues that economic growth will decrease because of increasing population and limited resources. They believed that the temporary increase in real GDP would cause a population explosion that would consequently cause decrease in real GDP. Keynes did not agree with the classical view that the supply of money influenced the price level directly and that the economy always stayed at full employment level.

2.2.3.2. THE KEYNESIANS ECONOMIC THEORY

In Keynesians theory, monetary policy as working of primarily through interest rate, an increase in the money supply leads to a fall in interest rate to include the public to hold additional money balances. It asserts that a change in the supply of money can permanently change such variables as the rate of interest, the aggregate demand, and the level of employment, output and income. As a result, when the supply of money is increased, its first effect is on the rate of interest which tends to fall. The falling interest rates affects in investment given businessmen expected profit.

The induced investment expenditure causes successive rounds of final demand spending by GNP to rise by a multiple of the initial change in investment. On the other hand, a fall in money supply causes the general level of interest rate to rise or increase. The increased investments also increase the level of income or output through the multiplier, which may stimulate economic activities.

2.2.3.3. NEO-CLASSICAL MODEL

Neoclassical growth model of (Solow, 1957)provide framework for analyzing economic growth. The determinant of long-term economic growth rate is through accumulation of factor inputs such as physical capital and labor. According to this model, the role of technological change is very crucial, even more important than the accumulation of capital. Here, long run per capita growth rate depends entirely on the exogenous rate of technological progress. Increase in savings rate will lead to a temporary increase in per capital K/L and per capita output. However, both would return to a steady-state of growth at higher level of per capita output. Savings has no impact on long-run per capita output growth rate but has an impact on long-run level of per capita output.

2.2.3.4. HARROD-DOMAR MODEL

This model was developed by (Harrod, 1939), and (Domar, 1946).It is based on Keynesian saving investment analysis. Mobilization of saving and generation of investment accelerates economic growth. Here, growth is a direct function of saving and has an inverse relationship with capital output ratio. Investment is the central variable of stable growth and it plays a double role by generating income and by creating productive capacity. The increased capacity which is arisen from investment can result in greater output or greater unemployment depending on the income. Savings and investment is a necessary condition for accelerated economic growth but it is not a sufficient condition.

2.2.3.5. ENDOGENOUS GROWTH MODEL

Broader approach of economic growth theory was stated in endogenous economic growth theory. In this model there are two broad approaches that is all inputs are reproducible and externalities. In both approaches saving rate plays an important role in the growth of capital and output per worker. Growth is primarily the result of endogenous not exogenous factors. Investment in human capital, innovation and knowledge are significant to economic growth which is previously ignored by previous scholars. . Here saving rates have effect on growth rates. As a result growth is determined by decision to invest in physical or human capital and the rate of growth depends on the type of capital a country invests in (Romer, 1994). This school of thought argued that there is role for government intervention in the working of financial markets which is highly against with (Mckinnon, 1973) and (Shaw, 1973) hypothesis.

2.2.4. PROXY MEASURES OF FINANCIAL LIBERALIZATION.

In most literatures of finance nexus growth literatures there is frequently insufficiently precise link between theory and measurement. Different authors' came up with different proxy measures of financial liberalization with their respective argument claiming as a best tool. As most of the data at macro level are costly and difficult to manage and consequently are prepared by international organization like International Monetary Fund and World Bank, most literatures cite these data source.

Financial liberalization defined as a combination of depth (size and liquidity of markets) accessibility (ability of individuals and companies to access financial service) (Yohannes, 2016). According to literature, the extent of financial deepening is best measured by the intermediary's ability to reduce information and transaction costs, mobilize savings, manage risks and facilitate transaction reduction fraction. According to studies there are three indicators of financial liberalization; domestic financial reform indicator (Gelos, 2002), stock market liberalization (Bekaert, 2001) and capital account liberalization (Kaminsky, 2001). Initially these indicators were based on monetary aggregates, such as M1or M3 mainly because these aggregates are widely available.

Financial measures can be related to internal and external measures. International financial liberalization includes: reduction or removal of controls on interest rates or return charged by financial agents, the withdrawal of the state from the activity of financial intermediation with the conversion of the "development banks" into regular banks and the privatization of the publicly owned banking system; the easing conditions for participation of both firms and investors in the stock market by diluting or doing away with listing conditions; by providing freedom in pricing of new issues; by permitting greater freedoms to intermediaries; The reduction in controls over the investments that can be undertaken by financial agents; The expansion of the sources from and instruments through which firms or financial agents can access funds; and liberalization of the rules governing the kinds of financial instruments that can be issued and acquired in the system (Ghosh, 2005). The external financial liberalization typically involved in exchange control regime, full convertibility for current account transaction. Capital account liberalization measures broadly covers: measures that allow foreign residents to hold financial assets; measures which allow domestic residents to hold foreign financial assets and measures that allow foreign currency assets to be freely held and treaded in the domestic economy (dollarization of accounts) (Ghosh, 2005).

2.2.5 POTENTIAL BENEFITS AND RISKS OF LIBERALIZATION

In most developing countries, banking sector dominates the financial system and security markets are not well developed. Restrictions on bank behavior imposed by government often results a negative real interest rate and an excess demand for credit, requiring banks to ration their lending. Consequently, credit is allocated to favored sectors and firms by administrative decisions rather than by market mechanism. Following financial liberalization, market liberalization of interest rate should result modestly positive real interest rates. These, in turn, will increase the resource available to the financial system, since bank deposits offering a competitive return that will attract saving that were previously held outside the formal financial sector. Positive interest rate will provide an incentive for borrowers to invest in more productive activities thereby improving productivity of the economy. In financially liberalized economy; domestic banks are forced to compete with international banks. As a result, knowledge spillover and technological advancement will improve efficiency of the host country market. The entry foreign banks in emerging markets that are healthier than domestic banks; so that liberalization improves bank supervision; in an open financial sector, cross-border flows are generally more volatile than locally generated claims by foreign branches and subsidiaries then financial stability will be maintained. Therefore, the overall effects of all these will create a positive effect on economic growth.

Nevertheless, the above paragraph mentioned about the potential benefits of financial liberalization, financial liberalization has its own limits. For instance, liberalization creates difficulties in creating competition and reduce monopoly power which creates high barrier to entry; cause poor quality due to the fact that government has less influence; the other and the main difficulties which is resulted from liberalization especially for least developed countries is, domestic financial sectors are not well developed in these least developed countries and due to efficiency and ability of international financial sectors to give huge amount of loans for borrowers every opportunity and returns goes out of the host county; monetary policy will be highly influenced by foreign banks and high commercial bank lending rate can be stated as a risk of financial liberalization to the host country.

2.3. EMPIRICAL REVIEW

Most empirical investigations on finance and growth have been conducted in three major ways: in the form of cross country level, in the form of panel studies and in the form of time series investigation. Short-lived, results from these empirical studies are still conflicting and inconclusive. While the focus of this chapter is on panel studies, attempts are made briefly to review some the important cross-country and time series studies.

A systematic analysis of the empirical literature on the relationship between financial liberalization and economic growth by conducting a meta-analysis, based on 441 t-statistics reported in 60 empirical studies was analyzed by (Bumanna, 2012). The study focused on explaining the heterogeneity of results reported in the studies in the sample, investigating the importance of study, data-and method-specific characteristics. The obtained result indicates that, on average there is a positive effect of financial liberalization on growth.

An investigation by (Ozdemir, 2010) presented that the impact of financial liberalization on economic growth in 10 new European Union countries and Turkey between 1995 and 2007 by constructing different financial openness indicators using panel data for different types of financial flows such as foreign direct investment, other investments, portfolio investments, trade openness index as well as other control variables. Employing generalized momentum method

(GMM) method, their static robust and dynamic panel data estimates that liberalization promotes economic growth.

(Levine R. , 2005), revealed some critics concerning Goldsmith's work by stating that the sample used was small (34 countries) and there was no investigation of the causality direction. In 1993 King and Levine restructure the work of Goldsmith by enlarging the sample size (77 countries) and by introducing control variables in the model. They found a strong positive relationship between finance and growth, but still they didn't investigate the causality issue and focused only on the banking sector.

(Achy, 2003), conducted a cross-country regression analysis to examine the effect of financial liberalization on savings, investment and economic growth in sample of five MENA countries (Egypt, Jordan, Morocco, Tunisia and Turkey) over the period 1970 – 1998. The study employed the Fixed-Effects Estimation which allows each country to have its own intercept. The findings suggest that financial liberalization has led to further distortion of credit allocation in favor of consumption at the expense of productive activities because the financial depth indicators fail to explain growth experience in these countries. The obtained outcome showed that financial liberalization is in line with the Keynesian view and contrary to financial development

The study of (Banam, 2010) analyzed the impact of financial liberalization on economic growth in Iran through Johansen Co-integration test using time series data from the time 1965-2005. The study also investigates the determinants of economic growth. Interest rate controls, reserve requirement and directed credit multiplied by -1 were used. The result showed that financial liberalization has strong and statistically significant effect on economic growth measured by gross domestic product in Iran.

(Tokit, 2005), evaluated the impact of financial liberalization on some macroeconomic variables in Turkey and India for the period spanning 1980 to 2003. The changing dynamics of domestic industrial production index, domestic interest rate, and trade-weighted average foreign industrial production index was analyzed by conducting Multivariate Granger-causality test. The findings suggest that there is an increased interdependency among the variables following the financial liberalization process. The study provides evidence on the increasing impact of foreign economies on both countries macroeconomic variables which implies that financial liberalization has been beneficial to both countries.

(Foluso, 2017), examine impact of financial liberalization on economic growth using 30 Sub-Saharan countries as a sample. Panel estimation was employed to examine financial liberalization and banking crises. Linear generalized model was used. The obtained result shows that financial liberalization is positive and significant but for low income countries it has negative impact even though it is statistically insignificant.

The econometric study of Bangladesh evaluated the impact of liberalization on the country's economic growth by analyzing quarterly data from 1974Q1 – 2002Q2 using Co-integration and Error Correction Method. The variables used was per capital GDP, gross investment as a share of GDP, labor force as a share of population, secondary enrolment ratio, trade openness indicator, real rate of interest and net capital inflows were used. The empirical results show that the coefficient of the financial liberalization policy variable is negative and significant, implying that financial liberalization has had negative effect of Bangladesh's economic growth (Bashar, 2007).

(Okapara, 2010), investigated the effect of financial liberalization on some macroeconomic variables in Nigeria. Real GDP, financial deepening, gross national savings, foreign direct investment and inflation rate were selected and given pre/post liberalization comparative analysis using the discriminate analysis technique. The findings show that the variable that impacts most on the economy owing to financial liberalization is the real GDP which recorded positively the highest contribution. From the result, it can be said financial liberalization positively increases the growth of the economy.

(Asamoah, 2008), assessed financial liberalization and its impact on savings, investment and the growth of GDP in Ghana which are key macroeconomic variables for economic growth. Monthly savings, interest rates and also yearly and seasonal dummy variables instead of post and pre-liberalization as the dummies were used. Ordinary Least Square (OLS) regression analysis was employed. The results show that the rise in interest rate over the years after liberalization of the financial sector has led to a corresponding increase in savings which has a positive impact on the growth of GDP. The findings showed that financial liberalization has increased the rate of capital accumulation and improved efficiency in capital utilization which is essential to economic growth.

To examine the relationship between financial development and economic growth in Egypt was attempted by (Abu-Bader, 2005) using data set form the time 1960 to 2001. VAR methodology was used. Gross Domestic Product to measures economic growth and ratio of money stock to nominal GDP, ratio of bank credit to the private sector to nominal GDP, ratio of credit issued to non-financial private firms to total domestic credit, representing proxies for financial development. Their findings show that the rise in private investment was facilitated by the financial liberalization.

(Kasekadene, 2003), concentrated on the case of Uganda examined the impact of financial liberalization on the conduct of banking business and its effect on the real sector. Quarterly data from 1987Q1 to 1995Q3 for the following variables: Gross Domestic Product, Commercial Bank Credit to the Industrial Sector, Premium on Official Exchange Rate, Lending Rate, and Inflation Rate were analyzed using the Vector Autoregressive (VAR) methodology. Their findings show that financial liberalization has promoted efficiency gains in the banking industry.

(Wamyama, 2014), studies on the impact of financial sector liberalization on financial development and economic growth using in Kenya data covering pre - reform and post - reform periods. The hypothesis on the existence of a co-integrated relationship between financial sector liberalization on financial development and economic growth was tested using Engle and Granger (1987) two-step procedure. The study employed a time series analysis to evaluate the impact of financial liberalization in the finance – growth nexus. The results showed that there is a significant relationship between the size of financial services sector and economic growth. This implies that the comprehensive measure of the size of the financial sector exerts a positive and `statistically significant effect on economic growth. However, financial liberalization has been found to have insignificant impact on financial development.

(Kozo, 2007), study on the case for financial liberalization in Ethiopia. The study focuses on issues of financial sector liberalization in Ethiopia, with reference in particular to the Ethiopian banking sector. The study identifies two factors that may constrain Ethiopia’s financial development. One is the closed nature of the Ethiopian financial sector in which there are no foreign banks, a non-competitive market structure, and strong capital controls in place. The other is the dominant role of state-owned banks. From the study Ethiopian economy would benefit from financial sector liberalization, especially from the entry of foreign banks and the associated privatization of state-owned banks.

(Temesgen, 2016) Studies on the financial development and economic growth: Granger Causality test in Ethiopia for the period 1980 to 2014. The study employed VECM technique. Financial development was proxy by money supply and credit to private sector. The result showed that there is a stable long-run relationship between financial development and economic growth.

Though the above paragraphs shows the positive side of liberalization effects on economic growth there are some studies showed no relationship between finance and growth. For instance, (Bennaceur, 2008)examine the finance-growth relationship in eleven Southern Mediterranean countries over the period 1979–2005 using GMM model and obtained result shows that no effect on growth. Furthermore, (Achy, 2003) explores the impact of financial development on growth, using panel GLS method for a sample of five countries of Southern Mediterranean countries over the period 1970–1999, and finds that there no significant relationship with growth.

The relationship between finance nexus economic growth has established a great deal of attention in modern economics. This theoretical relationship goes back to work off (Schumpeter, 1911). Several studies addressed the potential link between financial development and economic growth (Levine R. , 1997). However, despite rapidly growing literature, the debate concerning the effect of financial liberalization on economic growth is far from settled.

2.6 SUMMARY OF THE CHAPTER AND RESEARCH GAP

For the past decades IGAD region has recorded an impressive economic performance. On average economies of IGAD have been growing at annual rate of 5.9 percent since 2000. The global financial recession of 2008/09 has impacted the economy of the region. When we see the economic structure, agriculture and service contribute the largest share of the member countries which is 30.4 and 41.8 in 2010 respectively.[7]

Growth and performance of most IGAD members has been better than SSA average (Annual report on the state of IGAD economies, trade performance and prospects, 2014). Relatively Ethiopia, Kenya and Uganda have exhibited modest to economic growth. The economic aspects of members have been relatively stable. Important concerns of the member countries are financial gap and dependence on external sources than domestic saving. Financial sector contributes to economic growth by producing financial means through facilitating in production. However, not only IGAD countries but also most developing countries fail to finance their operation. As a result, they are forced to liberalized their finance or hold back their finance using different regulation mechanisms. Due to the fact that financial liberalization has a wide effect on economic growth, recently most studies are conducted on financial liberalization and economic growth.

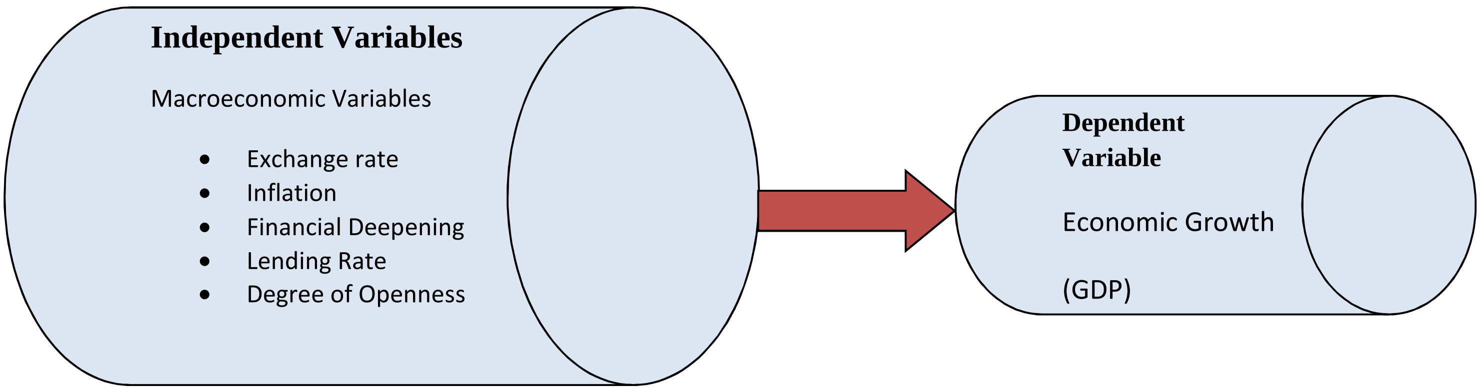
Temesgen (2016) studied on the financial development and economic growth. In addition, (Omar 2015) presented the effect of financial liberalization of economic development of Ethiopia using ARDL co-integration approach and (Kashaye, 2014) also analyzed banking sector liberalization on economic growth by using the same approach. (Garedachew, 2011), viewed sequencing effect of financial liberalization. On the other hand, in terms of more than single country studies (Yohannes, 2016), focused on financial development and economic growth by examining the effect of economic growth on the development of financial system on selecting sub- Saharan countries by employing MMER approach. The previous studies have viewed financial liberalization using different variables gave much emphasis on financial development and economic growth. According to researcher view, even though finance nexus economic growth is well entrench in academic discourse no consensus is reached as well as emphasis on IGAD members on the issue is nonexistent. This study tried to fill the gap on the effect of financial sector liberalization on economic growth.

[7] See Horn Economic Policy Institute

2.7 CONCEPTUAL FRAMEWORK

The model guiding this research is shown in Figure 1. On the left hand side, represents macro-economic variables affecting economic growth. Financial liberalization measured by using financial deepening. On the right side, economic growth measured by gross domestic product.

Figure 1: Conceptual Framework.



Source: own construction.

CHAPTER-THREE

RESEARCH METHODOLOGY

The purpose of this chapter is to present model specification, hypotheses and research approach that will be used in the study. The chapter is arranged as follows. 3.1 present the research approach that will be adopted, variable description and hypotheses for the study. Data collection, analysis and presentation techniques are explained in section 3.2. Model specification, variable description and hypotheses for the study are explained under section 3.3.Next summary of operational regression are presented in 3.4. The last section provides variable descriptions.

3.1. RESEARCH DESIGN

The main objective of the study is to examine the effect of financial liberalization on economic growth of selected IGAD countries. (Donald, 2013), discusses that explanatory studies unlike descriptive statistics, go beyond observing and describing the conditions and tries to explain the reasons of the phenomena. Explanatory research is devoted to finding relationship among dependent and independent variables. Hypothesis could be basic (i.e., relationship exist) or could be directional (i.e. positive or negative). The quantitative data gathering method are useful when a study measures cause and effect relationship evident between variables. Therefore, the study uses the quantitative research approach to examine the effect of financial liberalization on economic growth of IGAD countries.

3.2. DATA COLLECTION, PRESENTATION AND ANALYSIS

3.2.1. DATA AND DATA SOURCE

Any published or unpublished work that is one step removed from the original source, usually describing, summarizing analyzing, evaluating, and derived from or based on primary source materials is secondary data (Creswell, 2012). Only secondary data were utilized for the study.

Appropriate data help researchers to combine the strengths and amend some of the inadequacies of any source of data to minimize risk of irrelevant conclusion. Consistent and reliable research indicates that research conducted by using appropriate data collection instruments increase the credibility and value of research findings (Koul, 2006). Annual data collected from seven IGAD country members (i.e. Djibouti, Eretria, Ethiopia, Kenya, Somalia, Sudan and Uganda) of the east African region. Despite data constraints the study has gone through only four countries (i.e. Djibouti, Ethiopia, Kenya and Uganda) from total of seven countries in the region. The study period covers from 2007-2016. All data were collected from World Development Indicators (WDI)[8] however real exchange rate is collected from Bruegel datasets cite[9].

3.2.2. METHOD OF DATA ANALYSIS

To test the proposed hypotheses, statistical analyses have been carried out using the following methods: First, descriptive statistics (i.e. mean and standard deviation) of the variables (both dependent and independent) was calculated over the sample period and this was in line with (Malhotra, 2007), which states using descriptive statistics methods helps the researcher in picturing the existing situation and allows relevant information. Then, a correlation analysis between dependent and independent variables was made. Finally, fixed effect regression model including all of its assumptions, panel unit root and panel co-integration were employed. Data collected from different sources was analyzed by using Eviews 9 software package.

3.3. MODEL SPECIFICATION, VARIABLE DESCRIPTION AND HYPOTHESIS

3.3.1. THEORETICAL FRAMEWORK

McKinnon (1973) argued that positive and high interest rates are necessary for accumulation of money balance and physical capital accumulation will exist until real interest rate doesn’t exceed real return on capital. According to his argument money supply have a first order impact on decision to invest and decision to save. Hence, demand for money directly and positively affects economic growth.

The McKinnon model can be represented as:

[8] https://data.worldbank.org/products/wdi
[9] http://bruegel.org/publications/datasets/

$\left(\frac{M}{P}\right)d = f(Y, r, d, \pi *)$ (1)

$\left(\frac{I}{Y}\right)P = f(r, d - \pi *)$ (2)

$\left(\frac{M}{P}\right)d$= demand for real money balances

Y = Real GDP

$\left(\frac{I}{Y}\right)P$= ratio private investment to GDP

$d - \pi *$= Real money balances

r= Real return on physical capital

$\pi *$= Expected inflation rate

McKinnon's complementarities hypothesis requires the partial derivatives

$\frac{\partial\left(\frac{\frac{M}{p}}{p}\right)}{\partial\left(\frac{I}{Y}\right)} > 0$(3), and

$\frac{\partial\left(\frac{I}{Y}\right)}{\partial(d-\pi*)}$ >0 (4)

3.3.2. MODEL SPECIFICATION

In order to achieve the objective of the study, the researcher prepared data comprising both time series and cross-sectional elements; such data set is known as panel data or longitudinal data. As a result, the study used panel regression. The advantages of using panel data set; first and perhaps most importantly, it can address a broader range of issues and tackle more complex problems with panel data than would be possible with pure time-series or pure cross- sectional data alone. Second, it is often of interest to examine how variables, or the relationships between them, change dynamically (overtime) (Brooks, 2008). To do this using pure time-series data would often require a long run of data simply to get a sufficient number of observations to be able to conduct any meaningful hypothesis tests. But by combining cross-sectional and time series data, one can increase the number of degrees of freedom, and thus the power of the test, by employing information on the dynamic behavior of a large number of entities at the same time. The additional variation introduced by combining the data in this way can also help to mitigate problems of multicollinearity that may arise if time series are modeled individually. Third, by structuring the model in an appropriate way, we can remove the impact of certain forms of omitted variables bias in regression results. In analyzing the effect of financial liberalization on economic growth of selected IGAD countries between 2007-2016 using econometric method the study adopt the empirical model used by (Orji, 2015), (Sulaiman, 2012). The model was used to examine the effect of financial liberalization on economic growth. Financial deepening is included as a proxy of financial liberalization index. The model specified the endogenous variable Gross Domestic Product as a function of exchange rate, lending rate, inflation rate, financial deepening and degree of openness represents exogenous variables. The model is specified as thus:

Econometrically, the model setup may have as described in the following equation:

$$Y_{it} = a_i + BX_{it} + U_{it} \qquad (1)$$

Where Y_{it} is the dependent variable, a_i is the intercept term, B is parameter to be estimated on the explanatory variables,X_{it} is a vector of observation on the explanatory variables and u_{it} is the error term; t=1….T; i=1 …..N

The general representation of the model to estimate the effect of financial liberalization on economic growth is given in the equation below.

$$\text{GDP} = f\ (\text{ER, LR, INF, FD, DOP}) \qquad (2)$$

Where;

GDP =Gross Domestic Product

EXR = Exchange Rate

LR = Lending Rate

INF = Inflation Rate

FD = Financial Deepening

DOP=Degree of Openness

f = Functional Relationship

The econometric form of the equation (2) is represented as:

$$GDP_{it} = B_0 + B_1EXR_{it} + B_2LR_{it} + B_3INF_{it} + B_4FD_{it} + B_5DOP_{it} + e_{it} \ldots\ldots (3)$$

Where;

- B_0 = is the intecept
- B_1-B_5= slope or coefficient of each explanatory variable
- GDP_t- is real economic growth for i^{th} country in year t
- EXR_{it} – is annual exchange rate
- LR_{it}it – is the lending rate on annual average loans for year t
- INF_{it} – annual inflation rate
- FD_{it} – is money supply over GDP
- DOP_{it}– is the sum of import pus export over read GDP
- e_{it} - represents error term
- 'I' and 't' (the indices)- represent the cross section and time period respectively

3.4. VARIABLE DESCRIPTION

3.4.1. DEPENDENT VARIABLE

According to (Solow, 1957), economic growth is the increase in the amount of goods and services produced in an economy over time. It is the expansion of the nation's income. It allows a nation to forecast long term business Trends and compare different government policies. It indicates the direction of the economy. The measurement of growth is the GDP rate. GDP is the total dollar amount of goods and services produced in a country, the sum of all money spent in the economy whether on consumption, investment, and government spending and net exports. GDP rate is the percentage change of GDP over a certain period, usually one year.

The study used economic growth measured by the rate of the annual change in the GDP at constant prices. To measure economic growth, GDP was used and for precision logarithm of GDP used to tell the rate of growth.

3.4.2. INDEPENDENT VARIABLES

3.4.2.1. EXCHANGE RATE

An exchange rate is the price of nation's currency in terms of another currency. Thus, it has two components, the domestic currency and a foreign currency, and can be quoted either directly or indirectly. It is the rate at which the one currency may be converted in to another. It determines how much the residents of a country pay for imported goods, and services, and how much they receive as a payment for exported goods and services. Exchange rate can be nominal or real. Real exchange rate is obtained when inflation influences are excluded. Movement in exchange rate affects overall economic activity. Countries revalue and devalue their currency depending on their economic conditions. Therefore, movements in the real exchange rates do affect the overall output. In theory, currency depreciation is associated with possibilities for both contractionary and expansionary effects on outputs[10] of different sectors.

When a currency appreciates (rise in value of currency) or strengthens in relation to other currencies, imports get cheaper. This means you will buy more of another foreign currency so that you can purchase foreign goods. Higher exchange rate leads to trade deficits. Because strong currencies lead to cheaper imports, a country tends to import more than they export. This causes a trade deficit, which can exert a contractionary effect on the economy. This lowers demand for goods and as a result lowers GDP (Glüzmann, 2012).

Devaluation often invites a recession and inflation and thus pushes the economy into an inflation- devaluation spiral, causing a serious setback in economic development. High economic growth rate is most likely accompanied by a high investment rate and high export growth as well. Successful exports produce current account surpluses, resulting in nominal appreciation pressure on the currency unless the central bank intervenes in the foreign exchange market and accumulates foreign reserves (Takatoshi Ito, 1999).

Empirical evidence for example (Okapara, 2010), found that exchange rate has a positive effect Nigerian economy.(Di Nino, 20011), also conclude that there is a positive relationship between exchange rate and economic growth for a panel dataset covering the period 1861-2011. In

[10] See on Working paper of exchange rate and economic growth

addition, the authors show that undervaluation supported growth by increasing exports, especially from high-productivity sectors, in Italy in 1861-2011. (Nwadiubu, 2014), indicated that there is direct relationship between exchange rate and economic growth.

The study used annual real effective exchange rate measured by nominal effective exchange rate which is measured by local currency per dollar. From theories and empirical literatures it is expected to be positive.

3.4.2.2. LENDING RATE

Lending rate is the bank rate that usually meets short term and medium term financing needs of private sector. This rate is differentiated according to credit worthiness of borrowers' objective of financing. The terms and conditions attached to these rates differ by country, however, limiting by their compatibility. It is the cost of debt for the borrower and the rate of return for the lender.

There is a close link between bank lending rate. Economic condition changes over time in line with economic and business cycle and economic conditions may face a serious of booms and lumps (Folawewo, 2009). With much business cycle closures financial institutions unable to provide loan at a lower rate as they have to cover their cost. Therefore, lending rate is a tool in monetary policy when a county wants to increase and investment and consumption in the country's economy. As lending rate are increased, consumers tend to save as returns form saving are higher. With less disposable income being spent as a result of the increase in the interest rate, the economy slows down and visa vice (Keynes, 1936). High interest rate has a negative effect of increasing cost of borrowing and consequently limiting the level of aggregate investment and consumption. Therefore, the overall economy growth in the country affected negatively (Ng'etich, 2011). (Mckinnon, 1973), argued that high and positive interest rate creates money balance and it is essential for capital accumulation until interest rate doesn't exceeds real return on capital.

Empirical evidences for instance, (Daniel, 2014) found that lending rate has negative impact in Kenya. (Giovanni, 2012) argue that high interest rate have concretionary effect on annual real GDP, (Korior, 2006) finds that high lending rate by financial institution in the country have made the accessibility almost impossible to the poor and effectively negated on poverty alleviation, (Montiel, 1995), argue that financial system gain efficiency when spread between lending and deposit rate narrows.

In this study, lending rate is used based on average annual interest on loans. High interest rate reduces demand for borrowers by then reduces investment. Hence, Lending rate is expected to be negative.

3.4.2.3. INFLATION

Inflation is the annual percentage change in the cost of average consumer of acquiring basket of goods and services. It is a measure of general price changes in the economy. Inflation rate is the rate at which the general price for goods and services are rising and consequently purchasing power of currency is falling. A healthy rate of inflation is considered to be 2-3% per year[11]. There are many cause of inflation. For instance, money supply, national debt, demand pull effect, cost push effect and exchange rate effect. Economic growth is exogenously determined. Growth linked with: high level of saving and investment. In investigating economic growth, inflation treated as one of macroeconomic research and policy (Mamo, 2012). There are many controversial findings in the relationship between economic growth and inflation. The relationship between economic growth and inflation can be positive, negative or neutral (Mamo, 2012). However, the relationship between them is not the phenomenon rather the level of inflation affects economic growth positively or negatively. According to (Ghosh, 1998), there is positive relationship between inflation and economic growth when inflation is low. However, this relation turned to negative when inflation is high.

In practical evidence (Ghosh, 1998) found that inflation has significant negative impact when it is above 2.5% for a sample of 145 countries. (Khan, 2001), used OLS panel data for 140 countries and the result revels that inflation has negative impact on economic growth when it is above the trash hold level,

[11] https://www.moneycrasheres.com

The study used annual rate of change in the consumer price index as a measure of the level of inflation in the region. It is expected that the variable has a negative effect on economic growth of the countries.

3.4.2.4 FINANCIAL DEEPENING

Financial deepening is the sum of currency outside banks, demand deposits other than those of central government; the time saving and foreign currency deposits of resident sectors other than the central government; bank and travelers check; and other securities such as certificates of deposits and commercial paper. Financial deepening defined as the increased provision of financial services with a wider choice of services geared to all levels of society. It generally means an increased ratio of money supply to GDP, in other words, it refers to liquid money. The more liquid money is accessible in an economy; the more exist for continual growth (Shaw, 1973). Financial deepening stimulates higher investments, faster growth. Economic experts use financial deepening as an indicator of sufficient liquidity and smooth financial intermediation. Money supply and other prices indices constitute financial deepening indicators. Financial deepening defined as an increase in asset and the provision of needed financial services to the economy. Financial deepening measured as selected money relative to GDP. The ratio of private sector credit to GDP is also an alternative indicator of financial deepening. There is a linkage between financial deepening and economic growth, the financial system mobilizes pools and channels funds into productive capital and by doing so it contributes to economic growth. On the other hand, if the linkage goes from economic growth to financial development, then under this logic, the economic growth would increase demand for sophisticated financial instruments, which in turn leads to development in the financial sector (Levine R. , 2005).

(Banam, 2010), indicated in his finding that financial liberalization has strong and statistically significant effect on economic growth of Iran. (Asamoah, 2008), showed that that financial liberalization has increased the rate of capital accumulation and improved efficiency in capital utilization which is essential to economic growth in Ghana. (Kasekadene, 2003), financial liberalization promoted efficiency in Uganda. (Okapara, 2010), indicated that financial liberalization has positive effect in Kenya however the result is statistically insignificant. On contrary of these (Foluso, 2017), found that financial liberalization has positive and statistically significant relationship however for low income countries it has negative impact even though it is statistically insignificant. (Achy, 2003), on his study of five MENNA countries found that financial liberalization led to further distortion.

In this study, financial liberalization is proxied by financial deepening and measured by ratio of money supply to GDP. The variable is expected to have positive relationship to GDP.

3.4.2.5. DEGREE OF OPENNESS

The openness index is an economic metric calculated as the ration of country's total trade, the sum of export plus imports, to the country's gross domestic product. The reason why countries decide to open their economy[12] is that they obtain clear benefits from international trade. The relationship between openness and economic growth explained in international trade literature. Scholars postulated that openness has positive effect on economic growth. Countries that are more open have greater ability to catch up to lending technologies of the rest of the world (Romer, 1994). Openness promotes efficient allocation of resources through comparative advantages, allows dissimilation of knowledge and technological progress, and encourages competition in domestic and international market. Countries with greater ratio of export to GDP experience higher gain (Mélitz, 2003).

Trade openness enhances growth through: first, and more prominent, channel operates as a transmission mechanism of technological progress and spillovers that are generated by improvements in knowledge in trade-partner countries. Second, trade and technological diffusion reduce the redundancy effect of research duplication, and reduce cost and enlarge by encouraging research-intensive production that spurs economic growth (Tybout, 2003). Third, a related indirect channel of international trade occurs via competition among firms in outward-oriented countries. These pro-competitive gains from trade might force domestic firms to innovate by encouraging specialization that would have been unprofitable in smaller markets. This last channel is gaining momentum by a large micro econometric literature, in which the hypothesis of learning by exporting is thoroughly investigated (Mélitz, 2003).

[12] An open economy is an economy in which there are economic activities between the domestic community and outside.

(Nwadiubu, 2014), found that there is positive effect of degree of openness in Nigerian Economy. (Romer, 1994), found that export growth impacted on economic growth positively in less developed countries. (Onafowora, 1998), also found a significant positive effect of exports on economic growth for a sample of 12 Sub-Saharan Africa (SSA) countries, and concluded that it was possible to stimulate growth through an outward-oriented growth strategy.

This study used ratio of Import plus export to GDP as a measure of degree of openness in IGAD region. It is expected that degree of openness has positive effect on economic growth of the countries.

Table 3.1. Summary of explanatory variables and their effect on dependent variables

Classification	**Variable**	**Description**	**Expected effect**
Dependent Variable	Economic Growth	Annual real GDP growth rate	NA
Independent Variable	Inflation	reported annual inflation rate	Negative
Independent Variable	Lending Rate	Reported annual Interest rate	Negative
Independent Variable	Exchange rate	The reported annual exchange rate	Positive
Independent Variable	Financial deepening	Money supply/GDP	Positive
Independent Variable	Degree of openness	Import plus export over GDP	Positive

CHAPTER FOUR

RESULTS AND DISCUSSION

In the preceding chapters important literatures relating to the topic were reviewed with giving enough understanding about the topic and used to identify knowledge gap on the area. To meet broad research objectives and to test research hypotheses under it the research methodology used for this study was also discussed in the preceding chapter. In this chapter, collected data were presented and an important correlation and regression analysis finding was discussed. The current chapter has five sections. Under the first section (section 4.1.) the descriptive statistics of the dependent and independent variables was presented followed by correlation analysis under section 4.2. Section 4.3 presents the test for the classical liner regression model/CLRM. Then, the results of the regression analysis were presented under section 4.4. Finally; discussions for the results of the regression analysis were made under section 4.5.

4.1. DESCRIPTIVE STATISTICS OF THE DATA

The descriptive statistics for the dependent and independent variables are presented below. The dependent variable is economic growth. The independent variables were the macro economic factors; inflation lending rate, degree of openness, exchange rate and financial deepening were used to see the effect of financial deepening on economic growth. Table 4.1 bellow Present the descriptive statistics of the dependent and independent variables.

Table 4.1 descriptive statics of dependent and independent variables.

Variable	Mean	Max	Min	SD
LNGDP	6.096353	10.40000	2.200000	2.323690
INF	9.174327	26.23982	3.076285	5.712300
FD	5.933127	11.79289	2.269231	3.009422
EXR	105.7105	135.2136	87.86704	12.46032
DOP	50.76961	60.44867	37.92923	5.445653
LR	18.89008	26.15013	13.34034	3.724775

Source: own computations using Eviews 9 output.

The summary statistics contains different characteristics of data used in the analysis. The standard deviation shows how much dispersion exists from the average value. Low standard deviation that the data point tend to be very close to mean, while high standard deviation indicates that the data point are spread out over a large range of values. As shown in the summary statistics, all have low standard deviation except real exchange rate and degree of openness. This shows stability in the long-run relationship between the independent variables and economic growth.

Based on the table, mean of economic growth was 6% indicating the average real growth of the economy over the past ten years. Economic growth ranged from 10.4% to 2.2% and the standard deviation has little variation (i.e.2.32%). It is noted here that real economic growth is considered comparable between countries, as it enjoys relative stability.

The general inflation rate over ten years was 9.17% which was more than the average value of economic growth. The maximum inflation was recorded in Kenya in the year 2009 (i.e. 26.23%). The rate of inflation was dispersed over the periods towards the mean with standard deviation 5.71% representing the presence of fluctuation in inflation and its difference from year to year.

The mean value of financial deepening was 5.93%. Financial deepening has dispersed over the periods under the study towards mean value with standard deviation (i.e.3%) reflecting the presence of little fluctuation in financial deepening year to year.

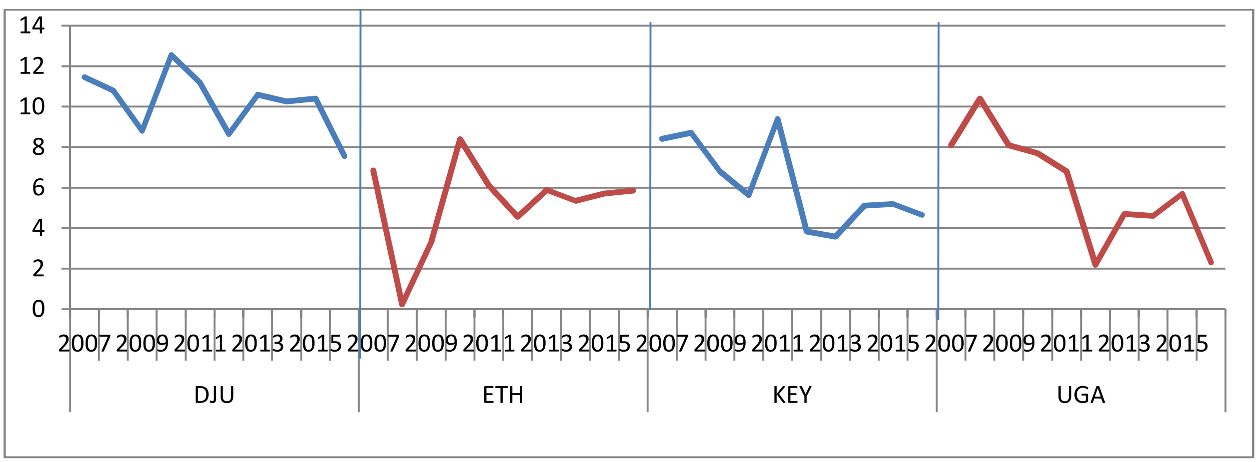
The average exchange rate was about 105 % during the study period and exchange rate ranged from 87.86% to 135.21% with a standard deviation of 12.46% representing the presence of high variation exchange rate during the study period.

The mean value of lending rate was 18.89%. The maximum value of lending rate was 26.15% and it was occurred in Uganda during 2012 while the minimum value was 13.34% and was recorded in Kenya during 2007.

Finally it is noted that the dependent variable is normally distributed where the importance of the Jarque-Bera test was greater than 5%, which shows the normal distribution of the variable which reflects the data of IGAD countries (i.e. Djibouti, Ethiopia, Kenya and Uganda) in ten years.

4.1.1. TRENDS OF ECONOMIC GROWTH

Figure: 2 Trend of economic growth



Source World development indicators, WB, own computation, 2018.

From the above figure, the highest value of Djibouti GDP was recorded as 11.46%. The trend of Ethiopia GDP is volatile compared to the other countries. There is almost very little growth in Ethiopia during 2008. In Kenya, the trend of their GDP is decreasing since 2011. GDP of Uganda also shows that their GDP trend is decreasing. Hence, form the figure GDP of Djibouti is stable and higher than the rest of the countries. In overall impressive economic growth is recorded.

4.2 PEARSON CORRELATION ANALYSIS

Result for Pearson's correlation analysis, has been performed in order to determine and identify if there is any significant and strong relationship between the dependent and independent variables. The summary of Pearson's correlation matrix is presented in table below.

Table 4.2 Pearson Correlation Analysis

	LNGGDP	INF	EXR	DOP	FD	LR
LNGDP	1					
INF	0.438888	1				
EXR	-0.263512	-0.2177850	1			
DOP	0.289488	0.528384	-0.316742	1		
FD	-0.812912	-0.272379	.555702	-0.008689	1	
LR	-0.430075	-0.162753	-0.435389	-0.201889	0.001073	1

Source: Eviews Output, WDI data and Own Constructions, 2018.

Output of Pearson correlation analysis (table 4.2) is represented in matrix form. The study has calculated correlation of the dependent variable with independent macroeconomic variables. It is found that GDP is positively related with inflation and degree of openness with a correlation coefficient of 0.438888 and 0.289488 respectively. On the other hand, exchange rate, financial deepening and lending rate are positively correlated with correlation coefficient of -0.263512, -0.812912 and -0.430075 respectively.

4.3 TEST FOR CLASSICAL LINEAR REGRESSION MODEL ASSUMPTION

4.3.1. TEST FOR AVERAGE VALUE OF THE ERROR TERM IS ZERO ASSUMPTION

The first assumption required is that the average value of the errors is zero. In fact, if a constant term is included in the regression equation, this assumption will never be violated. Therefore, since the constant term (i.e. **a**) was included in the regression equation, the average value of the error term in this study is expected to be zero.

4.3.2. TEST FOR NORMALITY ASSUMPTION

One of the classical assumptions while undertaking regression analyses is normality test. In order to conduct hypothesis test about the parameter, normality assumption must be fulfilled (Brooks, 2008) and (Gujatiti, 2004). A normal distribution is not skewed and is defined to have a coefficient of kurtosis 3. Bera-Jarque formalizes this by testing the residuals for normality and testing whether the coefficient and kurtosis are zero and three respectively. Skewness measures the extent to which a distribution is not symmetric about its mean value and kurtosis measures how fat the tails of the distribution are. The Jarque-Bera probability statistics/P-value is also expected not to be significant even at 10% significant level (Brooks 2008).As shown in the histogram in the appendix (1) kurtosis closes to 3 (i.e. 2.627728), and the Jarque-Bera statistics was not significant even at 10% level of significance as per the P-values shown in the histogram in the appendix (i.e. 0.1116625). Hence, the null hypothesis that is the error term is not normally distributed should not be rejected. Meaning that the error term in all of the cases follows the normal distribution.

4.3.3. TEST FOR AUTOCORRELATION

Here the assumption is that the errors are linearly independent of one another. If errors are correlated it could be said that they are auto correlated. Durban-Watson is employed to test the existence of autocorrelation. According to (Brooks, 2008), autocorrelation near value 2 indicates nonexistence of autocorrelation (even though there is no sign of autocorrelation is not dreary) but a value near to zero indicates there is positive autocorrelation and value near to 4 indicates negative autocorrelation. As a result, from the regression table DW is seen to be 1.58 which is near 2.

4.3.4. MULTICOLLINEARITY TEST

An implicit assumption that is made in using OLS estimation method is explanatory variables are not correlated with one another (Brooks, 2008). If there is no relationship between explanatory variables, there would be orthogonal to one another. If the explanatory variables were orthogonal to one another, adding or removing a variable from the regression would not cause the values of the coefficients on the other variable to change. According to (Brooks, 2008), the correlation between explanatory variables will be non-zero in practical context. When there is multicollinearity, the amount of information about the effect of explanatory variables on dependent variables decreases. As a result, many of the explanatory variables could be judged as not related to the dependent variables when in fact they are. This assumption does allow the independent variables to be correlated; they just cannot be perfectly correlated. If we did not allow for any correlation among the independent variables, then multiple regressions would not be very useful for econometric analysis. How much correlation causes multicollinearity however, is not clearly defined. (Malhotra, 2007), states that multicollinearity problem exists when the correlation coefficient among variables is greater than 0.75, (Kennedy, 2008) , suggests that any correlation coefficient above 0.7 could cause a serious multicollinearity problem leading to inefficient estimation and less reliable results. This indicates that there is no consistent argument on the level of correlation that causes multicollinearity. According to (Gujatiti, 2004), the standard statistical method for testing data for multicollinearity is analyzing the explanatory variables correlation coefficients (CC); condition index (CI) and variance inflation factor (VIF). Therefore, in this study correlation matrix of five of the independent variables shown below in the table were estimated. The results in the following correlation matrix show that the highest correlation of 0.555702 which is between financial deepening and exchange rate. Since, there is no correlation above 0.75, and 0.9 (Malhotra, 2007),(Kennedy, 2008) respectively. Therefore, we can conclude that there is no multicollinearity problem in this study.

Table 4.3 Correlation matrix of Multicollinearity

	INF	**FD**	**EXR**	**DOP**	**LR**
INF	1				
FD	-0.272379	1			
EXR	-0.217850	0.555702	1		
DOP	0.528284	0.008689	-0.316742	1	
LR	-0.162753	-0.001073	-0.435389	-0.201889	1

Source: Eviews Output, WDI data and Own Constructions, 2018

4.3.6. CHOOSING RANDOM EFFECT (RE) VERSUS FIXED EFFECT (FE) MODEL

If T (the number of time series data) is large and N (the number of cross-sectional units) is small, there is likely to be little difference in the values of the parameters estimated by fixed effect model/FEM and random effect model/REM. Hence the choice here is based on computational convenience. According to (Gujatiti, 2004) if the number of time series (i.e. 10 year) is greater than the number of cross-sectional units (i.e. 4 countries) fixed effect model may be preferable. On this score, fixed effect model is appropriate.

4.3.7. PANEL UNIT ROOT TEST

The starting point of time series variables is unit root test. Doing unit root test in time series studies is becoming common among researchers and increasingly gaining importance in the field of econometrics. However, as it can be seen in the studies by (Levin and Lin, 1992), (Im et al, 2003), the application of unit root tests in the panels is quite new. (Levin and Lin 1992) developed this model to allow fixed effects, individual determinant trends and heterogeneous correlation errors in series. Under this study, the stability of all variables is determined through the stability tests which were developed by Levin and Lin and Chu (LLC), ADF and PP. In all tests, it is seen that all the variables have no constant and trend. As presented in the following table, the general unit root process is in the first difference for all the variables, at 1% significance level, stable for LLC, ADF-Fisher and PP-Fisher tests. The stability results are given in Table 4.4.

Table 4.4 Panel unit root test

Variables	Methods	Statistics	Probability**
D(LNGDP)	Levin,Lin& Chu t*	-9.80086	0.0000
	ADF-fisher Chi-square	54.0782	0.0000
	PP-fisher Chi-square	57.7164	0.0000
D(INF)	Levin,Lin& Chu t*	-14.5817	0.0000
	ADF-fisher Chi-square	68.6528	0.0000
	PP-fisher Chi-square	69.3329	0.0000
D(EXR)	Levin,Lin& Chu t*	-4.61846	0.0000
	ADF-fisher Chi-square	27.8770	0.0005
	PP-fisher Chi-square	30.4041	0.0002
D(DOP)	Levin,Lin& Chu t*	-4.11593	0.0000
	ADF-fisher Chi-square	21.5803	0.0014
	PP-fisher Chi-square	26.2828	0.0002
D(LR)	Levin,Lin& Chu t*	-4.71447	0.0000
	ADF-fisher Chi-square	20.6460	0.0004
	PP-fisher Chi-square	21.5531	0.0002
D(FD)	Levin,Lin& Chu t*	-20.6962	0.0000
	ADF-fisher Chi-square	59.7976	0.0000
	PP-fisher Chi-square	61.5082	0.0000

Source: Eviews Output, WDI data and Own Constructions, 2018

Where, D Stands for First order difference.

4.4. RESULT OF REGRESSION ANALYSIS

Under the following regression outputs, the beta coefficient may be negative or positive; beta coefficient indicates that each variable's level of influence on the dependent variable. P-value indicates at what percentage or precession level of each variable is significant. R^2 Values indicate the explanatory power of the model and in this study adjusted R^2 value which takes into account the loss of degrees of freedom associated with adding extra variables were inferred to see the explanatory powers of the models.

Operational model: the operational panel regression model used to find the statistically significant economic growth of selected IGAD countries was measured by log of GDP was:

$$LnGDP_{it} = a_0 + B_1EXR_{it} + B_2LR_{it} + B_3INF_{it} + B_4FD_{it} + B_5DOP_{it} + e_{it}$$

Regression result for determination of economic growth of selected IGAD and (Djibouti, Ethiopia, Kenya and Uganda) countries measured by log of GDP presented as:

Table 4.5 Result of Regression Analysis

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.555510	4.700104	0.756475	0.4629
EXR	0.064179	0.027004	2.376638	0.0335**
LR	-0.503143	0.192199	-2.617827	0.0213**
INF	0.037165	0.038718	0.959897	0.3546
FD	-0.505554	0.140845	-3.589431	0.0033*
DOP	0.155987	0.050955	3.061237	0.0091*
	Effects Specification			
Cross-section fixed (dummy variables)				
R-squared	0.930277	Mean dependent var		6.096353
Adjusted R-squared	0.898097	S.D. dependent var		2.323690
S.E. of regression	0.741775	Akaike info criterion		2.509675
Sum squared resid	7.152985	Schwarz criterion		2.858181
Log likelihood	-18.09675	Hannan-Quinn criter.		2.577707
F-statistic	28.90860	Durbin-Watson stat		1.575600
Prob(F-statistic)	0.000001			

Source: WDI data and Own computation through Eviews 9.

Notes: * and ** are statistically significant at 1% and 5% significant level respectively.

Table 4.5 presents the result of economic growth (GDP) as a dependent variable and exchange rate, inflation, lending rate, financial deepening and degree of openness as independent variable for selected IGAD countries (i.e. Djibouti, Ethiopia, Kenya and Uganda). The regression F-statistics takes a value 28.90860. F statistics tests the null hypothesis that all of the slope parameters (B_s) are jointly zero. In the above case p-value of zero attached to the test statistics shows that null hypothesis should be rejected even at 1% level of significance. Meaning that all the independent variables (i.e. exchange rate, inflation, financial deepening, degree of openness and lending rate) are jointly influence the dependent variable (i.e. economic growth).

As shown in the above table exchange rate, inflation rate, financial deepening and degree of openness were statistically significant factors affecting economic growth in (Djibouti, Ethiopia, Kenya and Uganda). Financial deepening and lending rate had negative and statistically significant effect on economic growth at 1% and 5% respectively. Degree of openness and exchange rate had positive and statistically significant effect on economic growth at 1% and 5% significant level. Inflation rate is statistically insignificant (i.e. Prob-0.35246) effect on Djibouti, Ethiopia, Kenya and Uganda. The coefficient of financial deepening and inflation rate were against to our prior expectation.

4.5. DISCUSSION OF THE RESULTS

4.5.1. DETERMINANTS OF EXCHANGE RATE BEHAVIOR-DISCUSSION

Theories argued that falling exchange rate can be beneficial if the economy is uncompetitive and stuck in a recession. However, in a boom, devaluation could lead to inflation. On the other hand appreciation in the exchange rate is beneficial if it is caused by the economy becoming more productive and competitive.[13] In this study, the coefficient of exchange rate has positive effect on economic growth. This might be due to countries are experiencing global market integration and become competitive in the international market.

The result is in line with the prior expectation. The study found that there is positive and statistically relationship between exchange rate and economic growth. The obtained result is consistent with the findings of (Okapara, 2010), (Di Nino, 20011) and (Nwadiubu, 2014). This indicates that other things remaining constant, the coefficient value of the variable (0.064179) indicated a percentage rise/decline in exchange rate in Djibouti, Ethiopia, Kenya and Uganda resulted (0. 064179 %) rise/ decline in Djibouti, Ethiopia, Kenya and Uganda. Generally we reject the null hypothesis at 5% significance level (i.e. there is positive and statistically

[13] See https://www.economicshelp.org/blog/749/economics/understanding-exchange-rate/

significant relationship between exchange rate and economic growth of IGAD countries (i.e. Djibouti, Ethiopia, Kenya and Uganda)).

4.5.2. LENDING INTEREST RATE AND ECONOMIC GROWTH

Theories argued that economic growth and lending rate have negative relationship. The higher the lending rate, the fewer borrowers will have an incentive to invest because borrowers are willing to invest when marginal benefits from investment exceeds marginal cost hence demand for borrowing decrease. Therefore, investment will be less there by economic growth (Keynes, 1936). The research found that there is a negative and significant relationship between lending rate and economic growth. The coefficient of lending rate was in line with the researcher prior expectation. Other things remaining constant, the coefficient value of the variable (i.e. –0.503143) indicated a percentage rise/decline in lending rate of banks resulted in a ((i.e. -0.503143%) decline/rise in economic growth in countries. Generally, we reject the null hypothesis at 5% significant level (i.e. there is a negative and significant relationship between lending rate and economic growth) in Djibouti, Ethiopia, Kenya and Uganda. This result is consistent with the findings of (Daniel, 2014), (Giovanni, 2012) and (Nwadiubu, 2014).

4.5.3. INFLATION AND ECONOMIC GROWTH

Theories argue that inflation and economic growth has negative relationship. The result showed that the coefficient of inflation was positive but statistically insignificant, which means that inflation doesn't affect economic growth in Djibouti, Ethiopia, Kenya and Uganda. Inflation is statistically insignificant in this study and this might be due to the fact that the panel data was used for the study. This result differs from what was expected. Though the finding is consistent with (Ghosh, 1998), and (Mamo, 2012). The reason for this might be rise in price might be due to stimulation in the market, the new demand increase will lead to increase supply of goods and services accordingly in the long run. In addition to that rate of inflation is below trash hold level hence it stimulates growth. The coefficient estimate and the P value was 0.037165 and 0.35246 respectively which was insignificant even at 10% coefficient level. In this equation we can't reject the null hypothesis. Since the coefficient was statistically insignificant we could not say it shows positive impact on economic growth.

4.5.4. FINANCIAL DEEPENING

Financial deepening is a proxy of financial liberalization. (Mckinnon, 1973), (Shaw, 1973) and (Levine R. , 2005), argue that financial deepening has a positive effect on economic growth. On the other hand, (Keynes, 1936) and (Achy, 2003) argues that financial deepening has negative effect on economic growth this indicates that there is inconsistence in theories. The coefficient sign of financial deepening proved a negative impact of financial liberalization, which means that high money supply to GDP ratio reduces economic growth in Djibouti, Ethiopia, Kenya and Uganda. The result is against with the prior expectation. This might be due to high amount of money supply was injected in the economy more than economic growth rate and this in turn will leads to inflation. However, the obtained result is consistent with (Achy, 2003), (Bashar, 2007) and (Foluso, 2017). Other things remaining constant, the coefficient value for the variable (i.e. -0.505554) indicated a percentage rise/decline financial deepening resulted in (-0.505554%) decline/rise in economic growth in Djibouti, Ethiopia, Kenya and Uganda. Therefore, we reject the null hypothesis (i.e. there is significant and negative relationship between financial deepening and economic growth of the four countries at 1% significant level.)

4.5.5. DEGREE OF OPENNESS WITH ECONOMIC GROWTH

The coefficient sign of degree of openness shows positive impact of degree of openness on economic growth. The positive effect of degree of openness on economic growth is in line with the prior expectation which is based on the argument that trade openness enhance economic growth through comparative advantage, knowledge spillover and technological advancement (Mélitz, 2003). The regression output in table 4.6 revels that there is positive and significant relationship between degree of openness and economic growth, which means that the high ratio of import plus export to GDP increases economic growth in Djibouti, Ethiopia, Kenya and Uganda. Other things reaming constant, the coefficient value of the variable (i.e. 0.155987) indicates a percentage rise/decline in real degree of openness resulted in (i.e. 0.155987%) rise /decline in economic growth of Djibouti, Ethiopia, Kenya and Uganda. As a result, we reject the null hypothesis (i.e. there is positive and statistically significant relationship between degree of openness and economic growth at 1% significance level). This finding was consistent with (Romer, 1994), (Onafowora, 1998) and (Nwadiubu, 2014). Therefore, we reject the null hypothesis (i.e. there is positive and statistically significant relationship between degree of openness and economic growth in Djibouti, Ethiopia, Kenya and Uganda).

Finally the adjusted explanatory power was 89.8%, which is considered high reflecting the independent variables explain about the dependent variable. Durban-Watson statistics (1.575600) show that the dependent variable doesn't suffer from the problem of the serial link. The F-statistic (28.90860) shows that the study model is appropriate. The F Statistics obtained in the regression model tales about joint hypothesis of independent variables. All independent variables (inflation, exchange rate financial deepening, lending rate and degree of openness) jointly can influence the dependent variable (GDP). All independent variables jointly influence the dependent variables when p value is less than 5% then it is statistically significant. In this analysis p value is 0.000001 which is statistically significant at 1%. Meaning that inflation, exchange rate financial deepening, lending rate and degree of openness) jointly influence economic growth.

From the above regression table 4.6, the model can be mathematically expressed in the short run as:

$$lnGDP = 3.555510 + 0.064179_{exr} - 0.503143_{Lr} + 0.037165_{inf} - 0.505554_{FD} + 0.155987_{DOP}$$

4.6. PANEL CO-INTEGRATION TEST

One of the precondition for running co-integration test is variables has to be non-stationary at level but stationary at same order. As presented in the above result of panel unit root test, all variables are stationary at first difference with significance level of 1%. Kao co-integration is based on Engle-Granger Method is employed to test panel co-integration test.

Table 4.7 Panel co-integration test

Ho= No co-Integration

H1= Co-integration available

	t-Statistic	Prob.
ADF	-2.415919	0.0078
Residual variance	0.475188	
HAC variance	0.372336	

In the above hypothesis test statistics, the hypothesis is that there is no co-integration in Ho: series will be rejected and the alternative hypothesis will be accepted. In other words, we fail to reject the alternative hypothesis at 1% significant level. Therefore, it can be said that there is long run association between economic growth, financial deepening, lending rate, exchange rate, inflation rate and degree of openness

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

This chapter deals with conclusion and recommendations based on the findings of the study. Accordingly this chapter is organized in to two subsections. Section 5.1 presents the conclusions and section 5.2 presents the recommendations.

5.1. CONCLUSIONS

The study examined the effect of financial liberalization on economic growth in IGAD (Djibouti, Ethiopia, Kenya and Uganda) countries from 2007-2016. Financial liberalization was proxied with financial deepening. Five variables affecting economic growth (i.e. lending rate, exchange rate, degree of openness, financial deepening and inflation rate) were chosen and analyzed. Panel data used for the selected four IGAD countries from 2007-2016. Data was presented by using descriptive statistics. Classical linear regression model assumptions were tested before performing OLS regression. Fixed effect model was used for quantitative analysis. Panel unit root test was carried out to test stationary of the data. Panel co integration test was performed to test long run association between dependent and independent variables.

The study findings showed that there was highly significant relationship between lending rate, financial deepening, degree of openness and exchange rate based on the findings, the study concludes that financial liberalization proxied by financial deepening negatively affected economic growth of IGAD (i.e. Djibouti, Ethiopia, Kenya and Uganda) countries financial liberalizations of the essence of economic growth. However, most African countries get their liberalization in 1963, financial and economic liberalization is not achieved yet. The study showed insignificant relationship between inflation and economic growth.

The study findings show that there is long run association between lending rate, inflation rate, exchange rate, financial deepening and degree of openness and economic growth.

From the regression analysis the following regression equation was formulated;

$$lnGDP = 3.555510 + 0.064179_{exr} - 0.503143_{Lr} + 0.037165_{inf} - 0.505554_{FD} + 0.155987_{DOP}$$

Based on the result finding financial liberalization has negative effect on economic growth.

5.2 RECOMMENDATIONS

The summary of the previous section has identified which economic variables have significant effect on economic growth. Based on the findings the researcher forward the following policy options as a recommendation:

- The empirical result of this study doesn't support lassies-faire of interest rate liberalization. Lending rate has to be moderate that will be neither too high to discourage borrowers or too low to discourage financial savings.
- Exchange rate improves import competitiveness and enhances the external competitiveness. Moderate appreciation of exchange rate is good to make imports of goods cheap.
- Government of countries in the region has to intensify efforts on policies that will enhance growth which will in turn improve financial sector development of the economy.
- Further opening up of trades of would no doubt enhance efficiency with positive effect on their growth rate and economic growth as well.
- To have a successful financial liberalization, financial systems has to provide better service that enables the economy to grow faster.

5.3. FURTHER RESEARCH

Finally, there is a need for further studies to carry out on the effect of financial liberalization on economic growth. This study only focused on key macroeconomic variables. Financial liberalization is measured using proxies. However, there are also other variable that affects economic growth and there are also other measurements to measure financial liberalization. Conducive polices are not also considered in the study. For further studies and future researchers could further investigate fill the gap, so as to ensure financial reform in the region.

BIBLIOGRAPHY

Abu-Bader, S. &.-Q. (2005). *"Financial Development and EConomic Growth: Time Series Evidence From Egypt".* BEn-Gurion: Monaster Center of Economic Research.

Achy, L. (2003). Financial Liberalization Saving Investment and Growth in MENA Countries. *Middle East EConomics*.

Akapan, D. (2004). *Financial liberalization and Endogenious Growth: the case of Nigeria.* Dakar: African INstitute for Econnmic Development and Planning.

Arestis. (2005). Financial leberalization and relationship between Finance and Growth. *CEPP working paper*.

Asamoah, G. N. (2008). “The Impact of Financial Sector Reforms on Savings, Investments and Growth of Gross. *International Business and Economic Research Journal*, 73-84.

Banam, K. (2010). "Impact of finacial liberlization on economic growt in Iran: An Emperical Investigation". *Middle Easterrn Finance and Economics* .

Bashar, O. &. (2007, Feburary). Liberralization and Growth: An econometric Study of Bangladish.

Bekaert, G. H. (2001). Does financial liberalization Spur growth. *NBER working paper*.

Bennaceur, S. (2008). Determinantes of commercial bank interest margin and profitability: Evidence from Tunisia. *froontiers in finance and economics*.

Brooks, C. (2008). *Introductory Econometrics for Finance, 2nd Edition.* New York: Camnridge University Press.

Bumanna, S. H. (2012). *Financial Liberalization and Economic Groeth: A Meta Analysis, Technical Repoort.* Lendon : EPPI center, Social Science Research Institutte.

Chaw. (2008). The study of the casual relationship of financial development and economic growth.

Creswell, J. (2012). *.Educational research planning conducting, and evaluating qualitative research.* upper saddle river: N.J.prentice hail.

Daniel, M. (2014). effect of lending rate on economic growth in Kenya.

Di Nino, V. E. (20011). Real Exchange Rates, Trade,. *conomic History Working Paper*.

Domar. (1946). capital expansion, rate of growth and employement . *Econometrica*, 137-147.

Donald, C. &. (2013). *Business research methods: 12th Edition.* McGraw-Hill Education.

Folawewo, A. O. (2009). Determinants of Interest Spreed in Sub-Seharan African Countries. *13th Anual African Econometrics Society* (pp. 9-11). Pretoria: Republic of South Africa.

Foluso, A. &. (2017). The impact of financial liberlization on economic growth in sub-Saharan Africa. *Cogent Economics anf Finance*.

Fry. (1995). Money, Interest and Banking in Economic Development . *Johns Hopkins University Press*.

Garedachew, W. (2011). Qualitative Analysis of the Sequence and Timing of Financial Liberalization in Ethiopia. *Journal of Banking Financial Service and Insurance*, 64-75.

Gelos, G. &. (2002). Financial liberalization, credit constraints and collatral investment in Mexcian Manufacturing Sector. *journal of development economics*.

Ghosh, A. a. (1998). Warning: Inflation may be harmful to your growth. . *IMF Working Papers Vol. 45, No.4*.

Giovanni, P. (2012). *Rationalizing U.S. Immigration Policy: Reforms for Simplicity, Fairness, and Economic Growth".* Washington D.C. : The Hamilton Project.

Glüzmann, P. A.-Y. (2012). "Exchange rate undervaluation and economic growth: Díaz Alejandro (1965) revisited", . *Economics letters*, , 666-672.

Goldsmith. (1969). "Financial Structure and Development". *New Heaven CT*.

Gujatiti, D. (2004). *Basic Econometrics, 4th edition.* Mcgraw-Hill Companiees.

Harrod, R. (1939). An Essay in Dynamic theory . *Economic Journal*, 14-33.

Honohan. (1992). *"Financial repression" In the new Palgrave Dictnary of Money and Finance.* London and Basngdtoke: Mackmillan Press ltd.

Jelilove, G. (20016). THE IMPACT OF INTEREST RATE ON ECONOMIC GROWTH EXAMPLE OF NIGERIA. *african journal of science* , 51-64.

Kaminsky, S. &. (2001). On Booms and Crashes: Financial MArket Liberalization and Stock Market Cycles.

Kasekadene, L. &.-E. (2003). "Financial Liberalization and Its Implication for domestic Financial System: the case of Uganda". *African economic Research*.

Kashaye, H. (2014). Financial Liberalization and Econmomic Development : Evidence from Ethiopia (Ardl Approach to Co-integration.

Kennedy, P. (2008). *A Guide to econometrics. 6th edition.* Malden: Black Well publishing.

Keynes. (1930). *The general theory of Employment, interest rate and money .* Gutenberg.

Keynes. (1936). *The general theory of Employment, interest rate and money.* Gutenberg: Mackmillan press.

Khan, M. S. (2001). “Threshold Effects in the Relationship between inflation and Growth". *IMF staff paper*, 1-21.

Korior, N. (2006). . Retrieved from Ref www.ailafrica.com.

Koul, L. (2006). *Method of educational research.* New Delhi: Vikas publishing House.

Kozo, K. R. (2007). The case of fiancial liberalization in ethiopia. *Research Seminar in inernational economics*.

L., A. (2003). Financial liberalization Saving, investment and Growth in MENA countries. *Forth coming in Middle East Economics*.

Levine, K. a. (1993a). Finance, Enterprenurship and Growth- Theory and Evidence. *Journal of Monetary Economics 32*, 513-542.

Levine, R. (1997). Financial Development and Economic Growth: Views and Agenda. *Jourfnal of Economic Article*, 688-726.

Levine, R. (2005). *"Finance and Growth: theory and evidence".* Hand book of economic growth.

Malhotra, N. (2007). *Marketing Research: An applied Orientation, 5th ed.* New Delhi: PHI.

Mamo, G. (2012). relationship between inflation and economic growth. *Masters thesis*.

Mckinnon. (1973). *Money and Cpital in Economic Development.* Washington DC: Booking institute.

Mckinnon, R. (1973). *MOney ans Capital in EConomic Development.* Washington DC: Booking Institute.

Mélitz, M. (2003). *The impact of trade on intra-industry reallocation and aggregate industry productivity*. Econometrica 71, 1695-1725.

Montiel, P. J. (1995). ”Financial Policies and Economic growth” Theory evidence and Country-specific experiment from sub-Saharan, Africa. *AERC research paper*.

Munir, R. A. (2010, May). "Investment, Savings Interest rate and Bank Credit to the Private Sector in Pakistan". *International Journal of MArketing Studies*, pp. 1-9.

Nachega, J. (2001). Financial liberalization money demand and infilation in Uganda. *IMF working paper*.

Ng'etich, J. a. (2011). the effect of interest rate spreed on the level of Non-performing assete: case of commercial banks in Kenya. *Internationa journal of business and public managementl* , 58-65.

Nwadiubu, A. S. (2014). Financial Liberalization and Economic Growth in Nigeria Experiance. *European Journal of Business and Management*.

Okapara, G. (2010). The effect of financial liberalization on selected Macroeconomic Variables. *International Journal of Applies Economics and Finance*, 1-9.

Omar, M. (2016). Effect of Financial LIberalization on Economic Development of Ethiopia.

Onafowora, O. a. (1998). Can trade liberalization stimulate economic growth in Africa? *World Dev.*, 497-506.

Orji, A. J. (2015). Financial liberalization and economic growth in Nigeria: An emperical evidence. *International Journal of Economics and Financial Issues*, 663-672.

Ozdemir, D. a. (2010). *"Does Fiancial Liberalization Trigger Long Run Economic Growth?: Evidence from Turkey and Other recient EU Members.* Berlin: International Confrence on policy modeling.

Pill, M. M. (1997). Financial liberalization in Africa and Asia. *finance and development* .

R.I., M. (1973). *Money and Capital in Economic Development.*

Robinson. (1952). "The Generalization of General Theory" In the Rate of Interest and Other Essays. *Mackmillan Press Ltd*.

Romer, P. (1994). “The Origins of Endogenous Growth,”. *The Journal of Economic Perspectives,* .

Saunders M., L. P. (2000). *Research Methods for Business Students 2nd Edition.*

Schmukler, S. a. (2001). On Booms and Crashes: Financial LIberalization and Stock Market.

Schumpeter, J. (1911). *The Theory of Economic Development: An Inquiry into profits, capital, credit, interest and business cycle.* Cmbridge: Harvard University .

Shaw. (1973). *"Financial deepening in economic development".* New York: Oxford university Press.

Solow, R. (1957). *Technical chanfe and aggregate production gunction.* MIT pess.

Stiglitz, J. (2000). Capital LIberalization Economic Growth and Instability. *World Development*.

Sulaiman, L. O. (2012). Effect of financial liberalization on econoic growth in developing countries: the Nigerian experiance. *International Journal of Economics and*, 16-18.

Takatoshi Ito, P. I. (1999). Economic Growth and Real Exchange Rate: An Overview. *NAtional Bureau of economic research*.

Temesgen, G. (2016). Casual Relationship on Finacial Development and Economic Growth.

Tokit, E. (2005). The Impact of Financial Liberalization on Economic Variables: A two Country Analysis. *City University of New York*.

Tybout, J. (2003). *Plant and firm-level evidence on “new trade theories” in Choi, E.K., Harrigan, J., (eds),*. Blackwell Publishing.

Wamyama, S. J. (2014). Impact of financial sector liberalization on financial dvelopment and economic growth. *Journal of Economics and Sustainable Development*.

Yohannes, G. (2016, June). Finacial Development end Economic Growth.

APPENDIXES

1. correlation analysis

Date: 05/29/18 Time: 10:46
Sample: 2007 2016
Included observations: 20
Balanced sample (listwise missing value deletion)

Covariance	LNGDP	EXR	LR	INF	FD	DOP
LNGDP	5.129560					
EXR	-7.248226	147.4965				
LR	-3.610281	-19.19684	13.18025			
INF	5.534347	-14.73061	-3.289750	30.99886		
FD	-5.400436	19.79600	-0.011427	-4.448267	8.603791	
DOP	3.480021	-20.41774	-3.890322	15.61176	-0.135277	28.17238

2. Summary Statistics

	LNGDP	EXR	LR	INF	FD	DOP
Mean	6.096353328151076	105.7105101196255	18.89007546086249	9.1743272137	5.933126532464525	50.76961298609794
Median	5.668805818993098	102.0146891250471	19.4145980606994	6.729954507	4.614939870490288	51.0985411413601
Maximum	10.4	135.2135856904908	26.1501302489385	26.23981664	11.79289394485235	60.44867332023946
Minimum	2.2	87.86703929914545	13.340343675809	3.076285108	2.269230769230769	37.92923151496188
Std. Dev.	2.323690441208119	12.46031533868149	3.724775279030026	5.712300396244384	3.009422213431635	5.445653481424916
Skewness	0.06250680270551012	1.04655323421855	0.1543950830826888	1.522870475888308	0.4971480023117177	-0.3197523292907355
Kurtosis	2.079553340460369	3.240154786707146	1.92094727790262	5.096931822310867	1.8954058675708	2.849272365357716
Jarque-Bera	0.7190420454962725	3.698974174826318	1.049755119821839	11.39471751062425	1.840627285172619	0.3597375234935515
Probability	0.6980105772033371	0.1573178359218093	0.5916277988926786	0.003354814652261506	0.398394068141218	0.8353798380082321
Sum	121.9270665630215	2114.21020239251	377.8015092172499	183.486544274	118.6625306492905	1015.392259721959
Sum Sq. Dev.	102.5912080646777	2949.929708448245	263.6050667061909	619.9771405217412	172.0758191152195	563.4476949553508
Observations	20	20	20	20	20	20

3. Regression Result

Dependent Variable: LNGDP
Method: Panel Least Squares
Date: 05/28/18 Time: 19:36
Sample: 2007 2016
Periods included: 10
Cross-sections included: 2
Total panel (balanced) observations: 20

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.555510	4.700104	0.756475	0.4629
EXR	0.064179	0.027004	2.376638	0.0335
LR	-0.503143	0.192199	-2.617827	0.0213
INF	0.037165	0.038718	0.959897	0.3546
FD	-0.505554	0.140845	-3.589431	0.0033
DOP	0.155987	0.050955	3.061237	0.0091

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.930277	Mean dependent var	6.096353
Adjusted R-squared	0.898097	S.D. dependent var	2.323690
S.E. of regression	0.741775	Akaike info criterion	2.509675
Sum squared resid	7.152985	Schwarz criterion	2.858181
Log likelihood	-18.09675	Hannan-Quinn criter.	2.577707
F-statistic	28.90860	Durbin-Watson stat	1.575600
Prob(F-statistic)	0.000001		

4. Panel Unit Root Test

Panel unit root test: Summary
Series: D(LNGGDP)
Date: 05/28/18 Time: 19:39
Sample: 2007 2016
Exogenous variables: None
Automatic selection of maximum lags
Automatic lag length selection based on SIC: 0 to 1
Newey-West automatic bandwidth selection and Bartlett kernel

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-9.80086	0.0000	4	29
Null: Unit root (assumes individual unit root process)				
ADF - Fisher Chi-square	54.0782	0.0000	4	29
PP - Fisher Chi-square	57.7164	0.0000	4	32

** Probabilities for Fisher tests are computed using an asymptotic Chi

-square distribution. All other tests assume asymptotic normality.

Panel unit root test: Summary
Series: D(EXR)
Date: 05/28/18 Time: 19:40
Sample: 2007 2016
Exogenous variables: None
Automatic selection of maximum lags
Automatic lag length selection based on SIC: 0 to 1
Newey-West automatic bandwidth selection and Bartlett kernel

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-4.61846	0.0000	4	31
Null: Unit root (assumes individual unit root process)				
ADF - Fisher Chi-square	27.8770	0.0005	4	31
PP - Fisher Chi-square	30.4041	0.0002	4	32

** Probabilities for Fisher tests are computed using an asymptotic Chi -square distribution. All other tests assume asymptotic normality.

Panel unit root test: Summary
Series: D(LR)
Date: 05/28/18 Time: 19:41
Sample: 2007 2016
Exogenous variables: None
Automatic selection of maximum lags
Automatic lag length selection based on SIC: 0 to 1
Newey-West automatic bandwidth selection and Bartlett kernel

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-4.71447	0.0000	2	15
Null: Unit root (assumes individual unit root process)				
ADF - Fisher Chi-square	20.6460	0.0004	2	15
PP - Fisher Chi-square	21.5531	0.0002	2	16

** Probabilities for Fisher tests are computed using an asymptotic Chi -square distribution. All other tests assume asymptotic normality.

Panel unit root test: Summary
Series: D(INF)
Date: 05/28/18 Time: 19:42
Sample: 2007 2016
Exogenous variables: None
Automatic selection of maximum lags
Automatic lag length selection based on SIC: 0 to 1
Newey-West automatic bandwidth selection and Bartlett kernel

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				

Levin, Lin & Chu t*	-14.5817	0.0000	4	29
Null: Unit root (assumes individual unit root process)				
ADF - Fisher Chi-square	68.6528	0.0000	4	29
PP - Fisher Chi-square	69.3329	0.0000	4	32

** Probabilities for Fisher tests are computed using an asymptotic Chi -square distribution. All other tests assume asymptotic normality.

Panel unit root test: Summary
Series: D(FD)
Date: 05/28/18 Time: 19:44
Sample: 2007 2016
Exogenous variables: None
Automatic selection of maximum lags
Automatic lag length selection based on SIC: 0 to 1
Newey-West automatic bandwidth selection and Bartlett kernel

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-20.6962	0.0000	4	29
Null: Unit root (assumes individual unit root process)				
ADF - Fisher Chi-square	59.7976	0.0000	4	29
PP - Fisher Chi-square	61.5082	0.0000	4	31

** Probabilities for Fisher tests are computed using an asymptotic Chi -square distribution. All other tests assume asymptotic normality.

Panel unit root test: Summary
Series: D(DOP)
Date: 05/28/18 Time: 19:45
Sample: 2007 2016
Exogenous variables: None
Automatic selection of maximum lags
Automatic lag length selection based on SIC: 0 to 1
Newey-West automatic bandwidth selection and Bartlett kernel

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-4.11593	0.0000	3	19
Null: Unit root (assumes individual unit root process)				
ADF - Fisher Chi-square	21.5803	0.0014	3	19
PP - Fisher Chi-square	26.2828	0.0002	3	20

** Probabilities for Fisher tests are computed using an asymptotic Chi -square distribution. All other tests assume asymptotic normality.