School of Graduate Studies
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The Role of Commercial Banks Financial Intermediation on Economic Growth: Evidence from Ethiopia (1991-2020)

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STATEMENT OF DECLARATION

I, Wolde Bulto, hereby declare that a research entitled **"The Role of Commercial Banks Financial Intermediation on Economic Growth: Evidence from Ethiopia (1991-2020)**" submitted by me for the award of Executive Masters of Business Administration of Addis Ababa University, is original work and it has not been presented for the award of any other Degree, Diploma, Fellowship or other similar titles of any other university or institution.

Name: Wolde Bulto

Signature:_____

Date: _____

STATEMENT OF CERTIFICATION

This is to certify that thesis entitled,“ **The Role of Commercial Banks Financial Intermediation on Economic Growth: Evidence from Ethiopia (1991-2020)**” undertaken by Wolde Bulto for partial fulfillment of Degree of Executive Masters of Business Administration at Addis Ababa University, to the best of my knowledge, is an original work and suitable for the reward of the EMBA.

Advisor: Lakew Alemu (PhD)

Signature:_____

Date:_____

Approved by Board of Examiners

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Blessed Be God for Making It Happen!
WOLDE BULTO ADUGNA

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Abstract

With the main objective to assess the financial intermediation roles of Ethiopian commercial Banks in promoting economic growth, the researcher has reviewed pertinent literatures and conceptualized the research and adapted the concept of financial intermediation. Accordingly, an appropriate model has been specified to predict economic growth from commercial Banks' deposit, commercial Banks' credit to private sector, broad money, investment, minimum deposit interest rate and average lending interest rate along the sample period of the last thirty years (1991-2020). Secondary data from various sources have been collected to analyze and evaluate the role of the Ethiopian commercial banks using STATA. F-statistics, R^2, and adjusted R^2 revealed that the regression model is robust enough to predict the dependent variable. Moreover, Augmented Dickey Fuller and Durbin-Watson Statistic tests indicated that the variables are stationery at zero degree level. The output of the multiple time series regression model revealed that financial intermediation roles of Ethiopian commercial banks in promoting economic growth had a mixed result. Ethiopian commercial banks deposit, credit to private sector, and broad money had a positive contribution although the co-efficient are statistically insignificant along the sample period. Minimum deposit interest rate had also a positive contribution. However, investment and lending interest rate had been found to be adversely but weakly affecting economic growth highlighting for further studies as to the prevalence of such relationship. Finally, in lieu of the findings, the importance of enhancing deposit mobilization through designing appropriate strategies both at national and bank level and enhancing prudent lending to improve financial intermediation roles of the banks have been recommended to further strengthen the Ethiopian commercial banks' role of promoting economic growth in the country.

***Key Words**: Financial Intermediation, Ethiopian Commercial Banks and Economic Growth*

Acronyms

AbB:-Abay Bank S.C.

AdB:-Addis International Bank S.C.

AB: - Awash Bank S.C.

ADF:-Augmented Dickey Fuller test

ANOVA:-Analysis of variance

AIR: - Average lending interest rate

BIB:-Berhan International Bank S.C.

BoA:-Bank of Abissinia S.C

BuB:-Buna International Bank S.C.

CBE: - Commercial Bank of Ethiopia

CBO:-Cooperative Bank of Oromia S.C.

DB:-Dashen Bank S.C.

DGB:-Debub Global Bank S.C.

DIR:-Minimum deposit interest rate

DW:- Durbin–Watson statistic

EB: - Enat Bank S.C.

ETB:-Ethiopian Birr

HB:-Hiberat Bank S.C.

INVT:-Gross Investment of Ethiopia

LIB:-Lion International Bank S.C.

LnCBC:-Ln of commercial banks credit to private banks

LnCBD:- Ln of commercial banks deposit

LnINVT:-Ln of investment

LnM2:-Ln of broad money

LnRGDP:-Ln of Real gross domestic product

MSE:-Mean Square Error

NBE: - National Bank of Ethiopia

NIB:-NIB International Bank S.C.

OIB:-Oromia International Bank S.C.

RGDP: - Real Gross Domestic Product

WB: - Wegagen Bank S.C.

Year:- Fiscal Year of Ethiopia (July 01 to June 30)

ZB:-Zemen Bank S.C.

CHAPTER ONE

1. Introduction

Economic growth is one of the desires of all nations across the world. Combinations of economic factors are believed to help to achieve the desired objective of economic growth. Role of banks are among the important factors. In this regard, Nwaeze et.al (2011) opined that banks are important to the economy because they influence the level of economic activities in two ways through expansion and contraction of loans and investment. These activities alter the nation's money supply, and by extension affect the size of loans. These activities, in turn, influences what, how much and where to produce. Similarly, Peter (1999) identified banks as agents of economic development. This is because they invest directly in the economy and also grant loans to others for investment and purchase of securities.

Sanjib (2008) holds that banks contribute to the economy by mobilizing savings from the surplus economic unit and making these funds available to the deficit economic unit. By so doing, banks are able to finance investments. Many scholars share in the opinion that savings mobilized by banks are utilized by the deficit economic unit for investment which is capital accumulation to expand output and invariably leads to economic growth, Stigliz and Weiss (1988), Lewis (1991), Mauri (2009), Orji (2012), Meier (1995). Such roles of commercial banks are very detrimental factor in Ethiopian economy where there is very limited resources and capital market. The banks collect savings from the people and mobilize savings for investment in the economy. Ethiopian commercial banks are, therefore, capable of influencing the major saving propensities and opportunity as well.

1.1. Background of the Study

The primary role of the financial system in the economy is to aid in transforming the savings (income less expenditures on goods and services in a given time period) of individuals and companies in to investment (Purchases of physical assets that are used to produce goods and services) by others. Decades ago, Tobin (1967) put the role of banks as it is the principal means by which a person who has saved money out of the current income can transfer these savings to

someone else who has productive investment opportunities and needs money to finance them. This transfer of funds results in the creation of financial asset, which is the claim against the future income and assets of the person who issued the asset. From the viewpoint of the issuer this claim is a financial liability. Therefore, the financial assets and liabilities constitute a one-to-one correspondence and they are termed as the basic products or services of the financial system. In general, financial assets consist of money, debt and securities. The roles and function of commercial banks in general is too many and too vast.

Ethiopia has experienced different market problems because of the economic policies the country followed. If we consider the last thirty years' experience, the economic structure has been transformed and changed from the command economy to a relatively market led economy in 1992. Following government changes, the total socio-economy of the country had been revised and changed based on the needs of the governors. Thus, Ethiopia may not have as such advanced and developed marketing and financial institution practice.

However, banking and financial institutions in Ethiopia has been attempted to reorganize from time to time. Starting from the establishment of the very initial bank created by foreigners (Egyptians) and then under the Imperial regime, thirdly during the Derge regime and lately with the existing government it has been reorganized, revised and modified. The objective, the responsibility, the structure and the part of the economy the banks serve varies greatly. After the time Ethiopia established its own bank with full or majority share by the government, full regulatory and supervisory responsibility has been laid on the NBE.

As per data obtained from NBE, there are currently sixteen private and one state owned commercial banks in Ethiopia. In terms of market structure, the Ethiopian banking industry is

dominated by CBE. Accordingly, based on data obtained from NBE, recent average market share of CBE in deposit mobilization is more than 60 percent. Both are playing commercial banking activities. Therefore, it is worthy studying financial intermediation roles of Ethiopian commercial banks and their contribution in promoting economic growth of the country. Previous studies pertinent to the subject matter were mainly focusing on determinants of deposit mobilization, performance, profitability, efficiency and other descriptive researches as to financial service roles of the sector. In this research, an investigation has been undertaken based on empirical evidences along the time horizon of 1991 to 2020.

1.2. Statement of Research Problem

Financial intermediation roles of commercial banks are an essential component for economic development and growth; Benston GJ, Smith CW. A (1976). It involves institutions that raise funds by borrowing for on-lending. It makes the transfer of funds from the surplus sector to the deficit sector simple while financial intermediaries are firms that pool the savings or investments of many people and lend or invest the money to other companies or people to earn a return; Afolabi (1998). Furthermore, financial intermediaries create liquidity that drives the economy by borrowing short term and lending long-term.

Basically, banks can be considered as a root institution in the saving – investment process. Banks assume an important intermediary role by providing an increase in investments of a high proportion of externally generated funds but the fundamental question has been if the level of capital provided by the commercial bank to finance investment exerted any effect on economic growth given the fact that the availability of investible funds is one of the key factors in the growth process of any economy Kenn-Ndubuisi et.al (2015).

Growing economies place more responsibilities on their financial sector in order to mobilize the needed capital for investment. On the other hand, any economy existing without sustained funding is likely to have a very passive financial sector due to the lack of incentives put in place for investment. Doubt exists as to the sufficiency of commercial bank credits and investment adequacy for the purpose of achieving the desired economic growth especially in a developing country like Ethiopia. The relationship between the financial sector and economic growth has aroused a lot of debate in finance and economic literatures resulting into a vast global pool of empirical works.

Some are of the opinion that the banks through their intermediation activities contribute to economic growth such as Mckinnon (1973); Shaw (1973) Levine (2000) while others disagree like Stiglitz, 1988. In developing economies, the study is still an on- going research with empirical works such as Ugbaje & Ugbaje (2014), Acha (2011), and Iwedi and Igbanibo (2016) are amongst others.

These authors have looked at the relationship between financial intermediation of the banking sector deposit and credits as a whole and economic growth. However, this study intends to investigate the contribution of the commercial banks intermediation functions in Ethiopia with the inclusion of the interest rate which affects the propensity to borrow. It is against this backdrop that this study seeks to advance from previous works by investigating the contribution of the commercial banks financial intermediation functions and economic growth in Ethiopia by employing the real gross domestic product (RGDP) as a measure for economic growth because it has been adjusted for price changes (i.e., inflation) from an annual time series data (1991 - 2020) mainly from the NBE. Therefore, it is very important to clearly understand financial intermediation roles of Ethiopian commercial banks and economic growth with the help of

appropriate research model.

1.3. Research Questions

With the above general background on the financial intermediation roles of commercial banks and economic growth, the following main research questions have been addressed.

- How significant the Ethiopian commercial banks have played in promoting economic growth of the country?, and
- What are the major factors that help to predict the role of commercial banks in promoting economic growth in Ethiopia?

1.4. Objective of the Study

The general objective of the study is to empirically investigate the financial intermediation roles of Ethiopian commercial banks in promoting economic growth and specific objectives includes:

a. To analyze the effect of all commercial banks' loan on economic growth of Ethiopia,
b. To analyze the effect of average lending interest rate on economic growth of Ethiopia,
c. To analyze the effect of all commercial banks deposit on economy of Ethiopia,
d. To analyze impact of financial deepening on the economy of Ethiopia,
e. To analyze the role of Ethiopian commercial banks in promoting investment in the country, and
f. To evaluate trends of economic growth, gross fixed capital formation, broad money, deposits and loans in Ethiopia specifically since 1991 to 2020.

1.5. Research Hypotheses

The hypotheses to be tested in this study are presented in their null form as:

a. Economic growth hasn't been influenced by the level of financial deepening, M_2.
b. Deposit mobilized by Ethiopian commercial Banks has no significant effect on the economic growth of the country.
c. Ethiopian commercial Banks' credit to the private sector has no significant effect on the economic growth of the country.
d. Capital formation as a result of Ethiopian commercial banks financial intermediation roles has insignificant contribution to economic growth of the country; and
e. Interest rates of fund mobilized and lent by Ethiopian commercial banks have been positively contributing for economic growth of the country.

1.6. Significance of the Study

The significance of this study is to give insight information to researchers who are interested to conduct extensive study on this area. It is believed that the research will have contribution to the body of knowledge by identifying the potential relationship between financial intermediation roles of Ethiopian commercial banks and economic growth along time horizon of 30 years as well as it will hopefully serve as a good base for the forthcoming researchers who want to do further research on this topic in Ethiopia or elsewhere. Thus, by developing a conceptual framework regarding the relationship between economic growth and explanatory variables, this study will contribute to the current literature. Moreover, the study will benefit stakeholders such as researchers, policy makers, and professionals using the research as guide for future research, reappraise current economic practices.

1.7. Scope of the study

The work of this research is delimited to Financial Intermediation Role of Ethiopian Commercial Banks and economic Growth for the period of 1991/92 to 2019/20. The researcher aimed to deal this research by using longitudinal data of Real Gross Domestic Product as a dependent variable while commercial banks' deposit, commercial banks credit, gross capital formation, broad money and interest rate as explanatory variables. The methodology of this study delimited on quantitative method with descriptive statistics, correlation and regression analysis.

1.8. Limitation of the Study

Due to time constraint, the researcher is limited only on quantitative research analysis and basically focusing on the Financial Intermediation Role of Ethiopian Commercial Banks and economic Growth for the period of 1991/92 to 2019/20. However; this research can be taken as a base to investigate Financial Intermediation Role of Ethiopian Commercial Banks and economic Growth for the period of 1991/92 to 2019/20 for future research work by extending the time horizon and including other explanatory variables like inflation.

1.9. Definition of Operational Terms

Commercial Bank is a financial institution which performs the functions of accepting deposits from the general public and giving loans for investment with the aim of earning profit.

Commercial Banks Deposit is financial resources mobilized by commercial banks from savers of the economy.

Commercial Banks credit is defined as the aggregate amount of credit/funds provided by commercial banks for private to individuals, business organizations, industries and others except for the government.

The Durbin Watson statistic is a test statistic used in statistics to detect autocorrelation in the residuals from a regression analysis.

Economic Growth is an increase in the capacity of an economy to produce goods and services, compared from one period of time to another. It can be measured in nominal or real terms, the latter of which is adjusted for inflation.

Financial Intermediation is a business model that facilitates financial transactions between savers and borrowers. Savers want to securely store value and earn a return that protects funds from the effects of inflation**. Financial intermediation** is a method for connecting people and institutions that have surplus funds with parties who need funds to continue their activities. One of the simplest examples can be seen at a bank, where savers deposit money and the bank turns around and loans that money to borrowers who need funds for things like buying homes or cars.

Investment:-is a gross fixed capital formation of Ethiopia including private and public investments.

Broad money is the sum of currency outside banks; demand deposits other than those of the central government; the time, savings, and foreign currency deposits of resident sectors other than the central government; bank and traveler's checks; and other securities such as certificates of deposit and commercial paper**.** It usually measures financial deepening of an economy.

Real Gross Domestic Product (real GDP) is a macroeconomic measure of the value of economic output adjusted for price changes (i.e. inflation or deflation). This adjustment transforms the money-value measure, nominal GDP, into an index for quantity of total output.

Unit root tests are **tests for stationarity in a time series**. A time series has stationarity if a shift in time doesn't cause a change in the shape of the distribution; unit roots are one cause for non-stationarity. These tests are known for having low statistical power. Many tests exist, in part, because none stand out as having the most power.

1.10. Organization of the paper

The research paper is organized in five main chapters, the first chapter is general introduction which gives a background of the research paper, the research problem and scope and other basic issues of the paper, the second chapter deals with literature review which includes related theoretical, conceptual and empirical literature reviews. The third chapter presents Research Design and Methodology. This chapter highlights methodology of the Research, Research Design, Data Source, Model specification and methods of data collection and Methods of Data Analysis. The fourth chapter presents analysis and presentation. This chapter of the research paper concerned with analysis and interpretation, which shows and explains the descriptive statistics analysis, summary and robustness of the model, and appropriate interpretation of the multiple regression output. The final chapter (Chapter five) is concerned with summary, conclusions and recommendations. A "Reference" of related literature is cited while writing the paper, annexes and appendices are included after chapter five.

CHAPTER TWO

2. Review of Related Literature

2.1. The Finance Led Growth Theory

The financial intermediation theory was first formalized in the works of Goldsmith (1969), Shaw (1973) and Mckinnon (1973), financial markets were seen as key players in economic development and the different level of economic growth across countries were ascribed to the service capacity of their financial institutions.

The finance led growth theory is on the premises that financial sector development is a major stimulus for economic growth. The development of the financial sector will enable citizens and government mobilize needed fund necessary to achieve growth and development. Mohd-Nor (2015) acknowledged importance of well-functioning financial institutions in economic development has been extensively discussed in the literature more than decades ago since earlier works by Schumpeter (1911), Goldsmith (1969), McKinnon (1973) and Shaw (1973) despite contradictory contention from Robinson (1952) and Stern (1989) among others that financial sector development is not a determinant of economic development.

However, the bulk of empirical works on finance-growth nexus have upheld the significant impact of financial sector development on growth and development of the economy; McKinnon (1973); Shaw (1973); and Levine (200).

The finance led economic growth theory depends on information and cost approach, Benston and Smith (1976). In this regard, Benston and Smith (1976) were among the first works that investigated the relationship between the functions of financial intermediation in an economy and the existence of the transaction costs. Financial intermediation theory of banking says that banks collect deposits and then lend these out to be used for production, investment and

consumption. The two most distinctive features of a commercial bank are borrowing and lending, i.e., acceptance of deposits and lending of money to projects to earn interest (profit) Ezirim (1996). In short, banks borrow to lend. They handle the direct credit and investment in financial and real assets. However, interest rate on deposit and credit usually differs. The rate of interest offered by the banks to depositors is called the deposit interest rate while the rate at which banks lend out is called lending rate. The difference between the rates is called spread which is appropriated by the banks. On the other hand, advancement in the financial system brought about the introduction of the secondary market credit and mortgage markets, the modern market came into existence to take care of this new scope through the modification of the traditional theory. The two concepts that formed this theory include; the concept of liquidity provision which is based on the model of Diamond-Dybvig (1983) and the concept of risk management.

2.2. Empirical Literature Review on Financial Intermediation and Economic Growth

The nexus between finance and economic growth has been given considerable interest by scholars starting with the pioneering study of Schumpeter (1911). Schumpeter contended that financial intermediation through the banking system is critical for economic growth and development as it affects savings mobilization and allocation, which in turn perfect productivity, technical change and pace of economic growth. Schumpeter went further to state that if savings mobilized through the banking system is efficiently and effectively allocated by way of recognizing and funding entrepreneurs with the best chances of successfully implementing innovative products and production processes, economic growth would be boosted.

It is believed that credit should propel growth in the economy, however, Tahir, Shehzadi, Ali and Ullah (2015) while acknowledging the assertion of Iwedi M, Igbanibo DS. (2016) stated that the impact of credit is not always being positive on economic growth, and it is not difficult to understand the real way in which the growth of credit influences economic growth in the sense that when credit grows, consumers can borrow and spend more, and enterprises can borrow and invest more. Empirical studies have shown that credit to the public sector is weak in generating growth within the economy because they are prone to waste and politically motivated programmers which may not deliver the best result to the populace (Tahir, Shehzadi, Ali & Ullah, 2015).

Shittu, Ayodele Ibrahim (2015) modeled the long run relationship between the financial intermediation and economic growth in Nigeria using data from 1986-2014. Result of the vector error correction model suggested that financial intermediation has a long run relationship with economic growth in Nigeria. Commercial banks are mainly involved in financial intermediation, which involves channeling funds from the surplus unit to the deficit unit of the economy, thus transforming bank deposits into loans or credits (Afolabi, 1998). Domestic savings mobilization by banking industry and credit allocation functions stem from their role as the financial intermediaries in the domestic economy. The link between domestic savings and commercial bank is not a new discovery.

Hao (2006) seeks to establish the relationship between financial intermediation and investment, using a country-specific data from China. The study focused on the post-1978 reform period, using provincial data (28 Provinces) over the period 1985 to 1999. The study employed linear model, which expresses capital formation as a function lagged gross fixed capital formation, financial development indicators (banks, savings, and loan). It established a more robust

empirical relationship between financial intermediation, economic growth and capital formation. The study uses a cross-country analysis of 71 countries for the period 1960 to1995. This study also supports the argument that a positive relationship exist between financial intermediation and capital formation. However, it emphasized that this will be true if financial intermediation is measured by liquid liabilities(private deposits) and private credit as a ratio of GDP, while it will be weaker if it is measured using the Commercial-Central Bank ratio.

Using two impact models of Distributed Lag-Error Correction Model and Distributed Model, Orji (2012) has conducted a study on the impact of bank savings and bank credits on capital formation and economic growth in Nigeria. The empirical results showed a positive impact exists between the lagged values of total private savings, private sector credit, public sector credit, interest rate spread, exchange rates on capital formation and economic growth. Hence, the study recommend, among others, that government's effort should be geared towards improving per capita income by reducing the unemployment rate in the country in a bid to accelerate growth through enhanced savings.

Alex (2009) has conducted a study on the role of banks in investment and economic growth in developing nations using ordinary linear square (OLS) regression technique. The explanatory variables employed include commercial banks deposit liability, performance – economic growth in this instance from the various test carried out, it was find out that commercial banks deposit liabilities is elastic to gross fixed capital formation. This positivity of the coefficient of commercial banks deposit liabilities is in conformity to the economic a prior expectation of a positive impact of commercial banks deposit liabilities on gross fixed capital formation. Also, the regression result shows that a commercial banks credit has a positive impact on gross fixed capital formation. It is therefore, the study recommended that efforts should be made by the

monetary authorities to effectively manage the banks' maximum lending. This policy thrust will most likely result into increased investment activities which will enhance capital formation in developing nations needed for its real sector investments and industrial growth. One of the activities of financial institutions mainly Banks' involves intermediating between the surplus and deficit sectors of the economy.

Nwaeze, et.al (2012) has empirically investigated on role of financial intermediation on economic growth and capital formation. Under the study, time series data for the twenty years period 1992 – 2011 were collected from secondary sources and the Ordinary Least Squares (OLS) regression technique was used to estimate the hypotheses formulated in line with the objectives of the study. Real gross domestic product and gross fixed capital formation, proxy for economic growth and capital formation respectively was adopted as the dependent variable while the independent variables included total bank deposit and total bank credit. The empirical results of this study shows that both total bank deposit and total bank credit exert a positive and significant impact on the economic growth and capital formation in developing nations. Finally, the study recommend amongst others that banks should increase the interest paid to customers on the different bank accounts they operate to encourage more patronage from them and as well ensure that a major part of their credit is channeled to the productive sectors of the economy such as agriculture, industry and power.

Empirically, Sanjib (2008) has concerned with the analysis saving and capital formation which is the two major macro-economic indicators of the National Accounts Statistics. An accurate measure of the domestic saving and capital formulation helps in formulation of the monetary and fiscal policy. Some issues related to the present methodology of compilation of domestic saving and capital formation has been discussed in the paper. Empirically, it has been found that the

domestic capital formation in India is mainly financed by the domestic saving. Evidence of existence of long-run equilibrium relationship between domestic capital formation and domestic saving has been found through the application of co integration analysis.

Using the co integration and Vector Error Correction Modeling, Abdulsalam (2013) has conducted a study on banking sector development on economic growth and capital formation. Hence, the findings of the study revealed that in the long-run, liquid liabilities of commercial banks and trade openness exert significant positive influence on economic growth and capital formation. Conversely, credit to the private sector, interest rate spread and government expenditure exert significant negative influence. The findings implied that, credit to the private sector is marred by the identified problems and government borrowing and high interest rate are crowding out investment and growth. The study recommends that financial reforms should focus more on deepening the sector in terms of financial instruments so that firms can have alternatives to banks' credit which proved to be inefficient and detrimental to growth, moreover, government and thereby crowding out private investment.

Shittu, Ayodele Ibrahim (2007), in the study focused on capital formation and growth; the ordinary least square multiple regression analytical method was used to examine the relationship between capital formation, economic growth, bank saving and credit. The study tested the stationary and co- integration of Nigeria's time series data and used an error correction mechanism to determine the long-run relationship among the variables examined. The paper reviewed the literature and found that Harrod-Domar model has scarcely been used to test the relationship between capital formation and economic growth. The empirical study found that the data were stationary and co integrated and showed that there is a significant relationship between capital formation and economic growth in Nigeria. The results supported the Harrod-Domar

model which proved that the growth rate of national income will directly or positively be related to saving ratio and capital formation. The econometric results suggested the need for the government to continue to encourage savings, create conducive investment climate and improve the infrastructural base of the economy to boost capital formation and promote sustainable growth.

Odhiambo (2008) tested the causal relationship between finance and economic growth in Kenya from 1969 to 2005 by adopting two econometric techniques; the dynamic trivariate granger causality test and the error correction model. This study concludes an one-way direction causality, from economic growth to finance, exists in Kenya. In other words, finance plays a minor role in the attainment of economic growth in Kenya. Wolde-Rufael (2009) using data from 1966 to 2005 from Kenya had a contrary opinion to Odhiambo (2008) by using a different econometric technique, the Quad-variate Vector Autoregressive (VAR) framework and data from 1966 to 2005; the study concludes the presence of a two-way directional causality exists in Kenya.

McKinnon (1973) argued that the relationship between real interest rate and saving is positive for a developing economy. They hinge their argument on the fact that the financial markets of these countries are not well developed. The result shown in study of Orji (2012) in Nigeria that real interest rate in Nigeria has a statistically significant negative relationship with savings in the long run. This result does not conform to a priori expectation because theoretically, interest rate is expected to be positively related to savings.

Sheilla Nyasha1 and e.tal (2016) investigated the dynamic causal linkage between bank-based financial development and economic growth in Ethiopia during the period from 1980 to 2014. The study included savings and investment as intermittent variables in an attempt to address the

omission of variable bias – thereby creating a multivariate Granger-causality model. Using the newly developed autoregressive distributed lag bounds testing approach to co-integration and the error-correction model-based causality model, the study finds that in the short run, both financial development and economic growth Granger-cause each other in Ethiopia. However, in the long run, there is unidirectional Granger-causality from bank-based financial development to economic growth. The study, therefore, recommended that policies aimed at enhancing both economic growth and financial development should be pursued in the short run. However, in the long run, policies that target the development of the banking sector should be prioritized in order to ensure a sustained growth path. As far as my knowledge goes, there is no research that has been conducted in this area to provide empirical evidence on the financial intermediation roles of Ethiopian commercial banks in promoting economic growth. Hence, I hope that this research may contribute in filling gap and lay important base for further studies.

2.3. Conceptual Framework of the Research

2.3.1. Roles of Commercial Banks

Generally, commercial banks play an important role in the economic development of a country as witnessed by both theoretical and empirical studies that modern industrial economy cannot exist without them. They constitute nerve centre of production, trade and industry of a country. In the words of Wicksell (1965), "Bank is the heart and central point of modern exchange economy." They promote savings and accelerate the rate of capital formation, serve as source of finance and credit for trade and industry, promote balanced regional development by opening branches in backward areas, enable entrepreneurs to innovate and invest which accelerates the process of economic development, help in promoting large-scale production and growth of priority sectors, create credit in the sense that they are able to give more loans and advances than

the cash position of the depositor's permits, help commerce and industry to expand their field of operation and make optimum utilization of resources possible.

2.3.2. Overview of Banking System in Ethiopia

February 15, 1906 marked the beginning of banking in Ethiopia when the first Bank of Abyssinia was inaugurated by Emperor Menelik II Giday, B. (1987). It was a private bank whose shares were sold in Addis Ababa, New York, Paris, London, and Vienna. One of the first projects financed by the bank was the Franco-Ethiopian Railway which reached Addis Ababa in 1917. In 1931, Emperor Haile Selassie introduced reforms into the banking system.

The Bank of Abyssinia was liquidated; the newly established Bank of Ethiopia, a fully government-owned bank, took over management, staff and premises of the ceased bank. The Bank of Ethiopia provided central and commercial banking services to the country (Mauri, 2010). The Italian invasion in 1935 brought the demise of one of the earliest initiatives in African banking. During the Italian occupation, Italian banks were active in Ethiopia. On April 15, 1943, the State Bank of Ethiopia became the Central Bank and was active until 1963.The National Bank of Ethiopia was established in 1963 by Proclamation 206 of 1963 and began operation in January 1964. The establishment of the new organization was aided by U.S Department of State emissary, Earle O (Mauri, 2010). Latham, who was the first Vice President of the Federal Reserve Bank of Boston. Prior to this proclamation, the bank carried out dual activities: commercial banking and central banking (Mauri, 2010).

The proclamation raised the bank's capital to 10 million Ethiopian Dollars and granted broad administrative autonomy and juridical personality. Following the proclamation, the NBE was entrusted with the responsibilities to regulate the supply, availability and cost of money and

credit, to manage and administer the country's international reserves, to license and supervise banks and hold commercial banks reserves and lend money to them, to supervise loans of commercial banks and regulate interest rates to issue paper money and coins, to act as an agent of the Government and to fix and control the foreign exchange rates.

However, monetary and banking proclamation No. 99 of 1976 came into force on September 1976 to shape the bank's role according to the socialist economic principle that the country adopted (Mauri, 2010). Hence the bank was allowed to participate actively in national planning, specifically financial planning, in cooperation with the concerned state organs. The bank's supervisory area was also increased to include other financial institutions such as insurance institutions, credit cooperatives and investment-oriented banks. Moreover the proclamation introduced the new 'Ethiopian birr' in place of the former Ethiopian Dollar that ceased to be legal tender.

The proclamation revised the bank's relationship with Government. It initially raised the legal limits of outstanding government domestic borrowing to 25% of the actual ordinary revenue of the government during the proceedings three budget years as against the proclamation 206/1963, which set it to be 15%. This proclamation was in force till the new proclamation issued in 1994 to reorganize the bank according to the market-based economic policy so that it could foster monetary stability, a sound financial system and such other credit and exchange conditions which are conducive to the balanced growth of the economy of the country. Accordingly, the following are some of the powers and duties vested in the bank by proclamation 83/1994 and subsequent amendment of Proclamation number: 591/2008.

i. Coin, print or cause to be coined, printed and circulated the legal tender currency;

ii. Dispose or cause to be disposed coins and notes issued legally;

iii. Issue its own debt and payment instruments;

iv. Regulate and determine the supply and availability of money and credit as well as the applicable interest rates and other charges;

v. Formulate and implement exchange rate policy;

vi. Manage and administer the international reserves of Ethiopia;

vii. License and supervise banks, insurers and other financial institutions;

viii. Create favorable conditions for the expansion of banking, insurance and other financial services;

ix. Set limits on gold and silver bullion and foreign exchange assets which banks and authorized dealers can hold;

x. Set limits on the net foreign exchange position and on the terms and the amount of external indebtedness of banks and other financial institutions;

xi. Make short term and long term refinancing facilities available to banks and other financial institutions as might be necessary;

xii. Accept deposits of any kind from foreign sources;

xiii. Collect data from any person and prepare

xiv. Periodic economic studies, on the balance of payments, money supply, price forecasts and other relevant statistical indicators for analysis and for the formulation and determination of monetary, saving and exchange policies as are useful to Ethiopian economy;

xv. Act as banker, fiscal agent and financial advisor to the Government;

xvi. Take such steps to establish, modernize, conduct, monitor, regulate and supervise payment,

clearing and settlement systems;

xvii. Act in compliance with international monetary and banking agreements of Ethiopia and represent Ethiopia in the International Monetary Fund and other international financial organizations formed by central banks;

xviii. Coin special commemorative coins; establish and manage deposit insurance fund;

xix. Exercise such other powers and functions to execute its purposes as central banks customarily perform.

The proclamation has also raised the paid-up capital of NBE to ETB 500 million. The National Bank of Ethiopia is one of the original 17 regulatory institutions to make specific national commitments to financial inclusion under the Alliance for Financial Inclusion's (AFI) Maya Declaration (Maya, 2011). Finally, it is worth mentioning that the minimum paid up capital to establish a private commercial bank is ETB 500 million.

2.3.3. Overview of Performance of Commercial Banks in Ethiopia

The prevailing data of banks in Ethiopia reveals that our banking industry is dominated by CBE. The set up looks like monopolistic market structure. There are sixteen private and CBE commercial banks in Ethiopia. In fact, there are also a number of private commercial banks under formation, which will increase the number of commercial banks in the country.

Table1: Selected Data of Commercial Banks in Ethiopia as at June 30, 2020

S.N.	Bank	Deposit in ETB	Asset in ETB	Market Share in %	
				Deposit	Asset
1	CBE	600,489,000,000.00	813,841,000,000.00	57.31%	59.02%
2	AB	70,232,570,000.00	95,624,800,000.00	6.70%	6.93%
3	DB	53,353,610,000.00	67,938,730,000.00	5.09%	4.93%
4	BoA	47,513,037,000.00	56,424,030,000.00	4.53%	4.09%
5	WB	30,095,000,000.00	37,954,000,000.00	2.87%	2.75%
6	HB	34,698,400,000.00	43,203,600,000.00	3.31%	3.13%
7	NIB	33,320,500,000.00	41,965,500,000.00	3.18%	3.04%
8	CBO	45,510,910,000.00	52,917,410,000.00	4.34%	3.84%
9	LIB	26,131,800,000.00	31,636,400,000.00	2.49%	2.29%
10	OIB	27,568,000,000.00	34,059,719,713.73	2.63%	2.47%
11	ZB	14,415,400,000.00	18,367,000,000.00	1.38%	1.33%
12	BuB	13,874,760,000.00	18,637,700,000.00	1.32%	1.35%
13	BIB	16,533,000,000.00	21,011,000,000.00	1.58%	1.52%
14	AbB	16,031,000,000.00	20,039,600,000.00	1.53%	1.45%
15	AdB	4,583,000,000.00	6,394,200,000.00	0.44%	0.46%
16	DGB	5,240,390,000.00	7,736,330,000.00	0.50%	0.56%
17	EB	8,233,200,000.00	11,262,000,000.00	0.79%	0.82%
Total		**1,047,823,577,000.00**	**1,379,013,019,713.73**	**100.00%**	**100.00%**

Source: Compiled from Annual Reports of Banks and Computed Accordingly

2.3.4. Establishment Purpose of Ethiopian Commercial Banks

In Ethiopia, there are public and private commercial banks. The largest commercial bank of the country, CBE, is fully owned by the government**.** On the other hand, there are sixteen private owned commercial banks operating in the country. **T**he banking has been practiced and expanded in through the businessmen and the society starting from the imperial regime till the current time. Ethiopian private banks and private financial institutions are established by the current government with different rules and regulations enacted by NBE.

2.3.4.1. Establishment and Investigated Roles of CBE

The CBE is re-established in 1994 as a public enterprise owned by the Federal Government of Ethiopia. Council of Ministers Regulation No. 202/1994 has re-established the bank. As indicated under article 5 of this regulation, CBE is established for the following purpose: -

i. To accept savings, demand and time deposit;
ii. To draw, accept, discount, buy and sell bills of exchange, drafts and promissory notes payable within or outside Ethiopia;
iii. To issue letters of credit;
iv. To provide short and medium term loans and, within a limited ceiling, long term loans;
v. To buy and sell foreign exchange;
vi. To buy and sell negotiable instruments and securities issued by the Government, private organizations or any other person;
vii. To accept and keep in safes securities, jewels and other valuables;
viii. To issue cheques and travelers cheques, and generally deal in cheques;
ix. To act as an agent for persons and, in this capacity, engage in the sale of money and shares;

x. To participate in equity investments;

xi. To engage in such other banking activities as are customarily carried out by commercial banks.

In line with its purpose of establishment, CBE has been undertaking all activities of commercial banks. Moreover, the bank has also taken-over Construction and Business Bank (CBB) following decision of the government. It is providing many types of deposits, credit facilities, trade finance, bank guarantee facilities and other financial services to its customers including Federal and Regional governments. There are basically three types of deposits: current account, saving account and fixed time account deposits. Current account deposits are payable on demand and are, therefore, called demand deposits. These can be withdrawn by the depositors any number of times depending upon the balance in the account. The bank does not pay any Interest on these deposits but provides cheque facilities. These accounts are generally maintained by businessmen and industrialists who receive and make business payments of large amounts through cheques.

Fixed deposits have a fixed period of maturity and are referred to as time deposits. These are deposits for a fixed term, i.e., period of time ranging from a few days to a few years. These are neither payable on demand nor they enjoy cheque facilities. They can be withdrawn only after the maturity of the specified fixed period. They carry higher rate of interest. They are not treated as a part of money supply recurring deposit in which a regular deposit of an agreed sum is made is also a variant of fixed deposits.

Savings account is most suitable for individual households. They combine the features of both current account and fixed deposits. They are payable on demand and also withdrawable by cheque in certain circumstances. But bank gives this facility with some restrictions, e.g., a bank

may allow four or five cheques in a month. Interest paid on savings account deposits in lesser than that of fixed deposit.

Moreover, there are a number of credit products and services. An overdraft credit facility is an advance given by allowing a customer keeping current account to overdraw his current account up to an agreed limit. It is a facility to a depositor for overdrawing the amount than the balance amount in his account. In other words, depositors of current account make arrangement with the banks that in case a cheque has been drawn by them which are not covered by the deposit, then the bank should grant overdraft and honour the cheque. The security for overdraft is generally properties like buildings, motor vehicles, shares, life insurance policies of the account holder and business mortgages.

The other form of credit facility is term loan with maturity period of short, medium and long terms. The purpose of such loans could be working capital and to support investment. Such loans may take a number of forms depending on the line of businesses. The bank also provides international trade finance and services including letter of credit, cash against document and others. The bank is also providing a variety of digital banking services.

2.3.4.2. Establishment Purpose of Ethiopian Private Commercial Banks

Private commercial banks in Ethiopia are established in line with the purposes enumerated on the Banking Business proclamation number 592/2008 and its amendment proclamation number 1159/2019. In the proclamation, a commercial bank is authorized to serve the following functions:

i. Receive deposits - take money in from individuals and businesses (called depositors)

ii. Disburse payments - make payments upon the direction of its depositors, such as honouring a check

iii. Collections - a bank will act as your agent to collect funds from another bank payable to you, such as when someone pays you by check drawn on an account from a different bank

iv. Invest funds in securities for a return

v. Safeguard money - banks are considered a safe place to store your wealth

vi. Maintain and service savings and checking accounts of its depositors

vii. Maintain custodial accounts - accounts controlled by one person but for the benefit of another person, such as a trust account

viii. Lend money

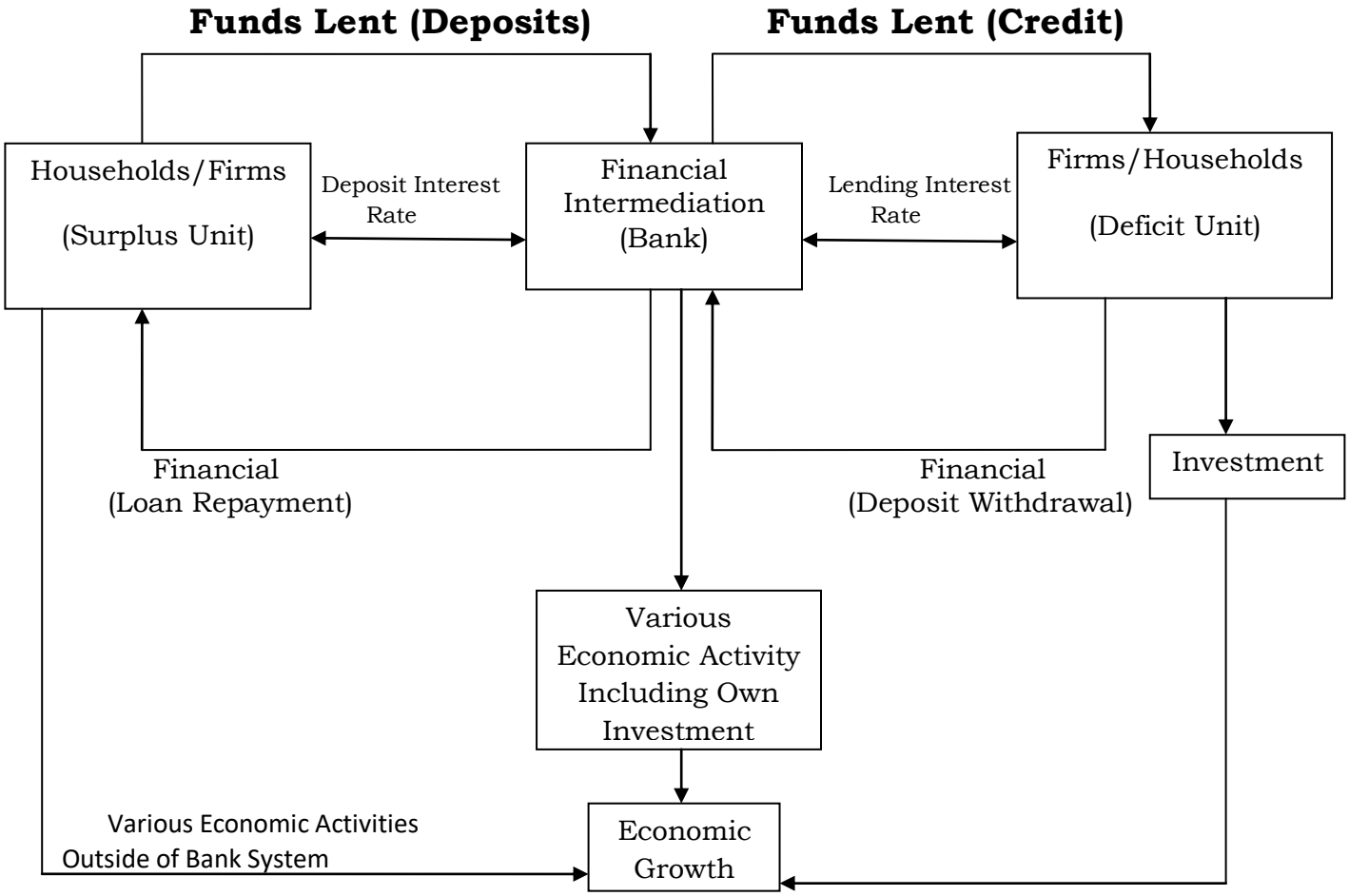
Hence, Commercial banks are source of financing for private capital investment in the country.

2.3.5. Conceptualization of the Research

Financial intermediation roles are a system of channeling funds from lenders (surplus economic unit) to borrowers (deficit economic unit) through commercial banks. Commercial banks exist to link the relationship between lenders and borrowers. They intervene to smoothen the flows of finance. With financial intermediaries, lenders and borrowers need no longer transact directly as financial institutions act as a link between these units. In the process, commercial banks contribute to the capital formation and trading to ultimately impact on economic growth. The other important point to be noted is that variability in deposit position of commercial banks may be cited to be one of the influencing factors of their credit policy. Commercial banks follow a lending policy whose deposits show little or no fluctuations. Sometimes, a bank having erratic

movements in deposits may follow conservative lending policy. Therefore, lending policy may be affected by variability in deposits. Monetary policy of NBE also influences the lending policy of the bank by controlling the credit limits. By the cash reserve ratio and the net liquidity ratio, NBE controls the credit powers of the banks. Monetary policy of NBE affects much in determining the lending policy. Capital of commercial banks provides the cushion to absorb the losses that may occur. So, the capital position of a bank is probably the most important influencing factor in a bid to meet the capital adequacy ratio of 8% set by NBE. Therefore, given the roles of commercial banks, the researcher has conceptualized the research case as follows.

Figure 1: Conceptual Framework Diagram



Source: - Adapted from Buckle and Thompson (1998) P.15 with Researcher's Modification

CHAPTER THREE

3. Research Methodology

This chapter highlights methodology of the Research, Research Design, Data Source, Model specification and methods of data analysis.

3.1. Research Design

There are three research paradigms; these are quantitative, qualitative, and mixed researches. Quantitative research is generally made using scientific methods, which can include: the generation of models, theories and hypotheses, the development of instruments and methods for measurement, experimental control and manipulation of variables, collection of empirical data modeling and analysis of data evaluation of results.

Quantitative research uses the deductive or confirmatory or "top down" scientific method; it is used primarily for description, explanation, and prediction. It is based on quantitative data, in particular on the analysis of variables. The results are statistical and a goal is to generalize the results. A quantitative approach is one in which the investigatory primarily uses postpositive claims for developing knowledge (i.e., cause and effect thinking, reduction to specific variables and hypotheses and questions, use of measurement and observation, and the test of theories), employs strategies of inquiry such as experiments and surveys, and collect data on predetermined instruments that yield statistics data (Creswell, 2009).

In a bid to achieve the objective to investigate the financial intermediation roles of Ethiopian commercial banks in promoting economic growth, the researcher used quantitative research approach. The main objective of this research is to investigate the role of Ethiopian commercial banks deposit, credit to private sector, investment, interest rate and broad money in a bid to

promote economic growth. The study adopted an explanatory approach by using time series data of 30 years to realize the stated objective. As quoted from Chris Brooks (2008) while longitudinal studies are often more time consuming and expensive than cross-sectional studies, they are more likely to identify causal relationships between variables.

Thus, it is the most appropriate design for identifying the relationships between the level of economic growth of the country and six explanatory variables representing commercial banks deposit, Credit to private sector, Gross fixed capital formation as proxy by investment, minimum deposit interest rate and Average Lending Rate along the time horizon of 30 years.

3.2. Sampling Design, Source of Data and Data Gathering Instruments

The identification of the most appropriate sample size depends on a careful and detailed planning of all stages of the research from its paradigm, to data collection materials and to data analysis techniques. Hence, in-line with the data requirement of the specified model, secondary data of the sampling period from 1991 to 2020 has been diligently collected and cross-checked before using for analysis. The data has been collected from published reports and official web pages of NBE, EIC, World Bank and MoFED (Ministry of Finance & Economic Development) for the sampling period. Moreover, Commercial banks' deposit, credit and lending interest rate data are collected and cross checked mainly from respective banks and NBE.

3.3. Model Specification

In the model specified below, the researcher attempted to investigate the impact of financial intermediation roles of Ethiopian commercial banks on economic growth. There are many variables that are essential in explaining economic growth in developing countries. However, it is not possible to include all of them. The variables in this study were chosen because of their

significance and availability of data. The model is derived on the basis of previous studies of Orji Anthony (2001), and Dunning, (1993) with some modification to examine roles of the Ethiopian commercial banks in deposit mobilization, extending credit to private sectors, broad money, average interest rate and investment from the period of 1991 to 2020 by using Multiple Linear Regression.

In a modern business environment banks do perform a number of functions which are classified into two major parts, primary functions and secondary functions. (Jhingan, 2001 and Agu, 1988) Primary or principal functions are three types such as Acceptance of Deposit, Lending and Investment. Thus, the econometric model is specified based on the relation outlined in the hypothesis, on the basis of previous studies of Orji Anthony (2001) based on principal functions banks do perform. The chosen model is strongly believed to capture the essence of the subject under research. The explanatory variables include CBCPS, CBD, M_2, INVT, ALIR and DIR along the sample period of last thirty years.

Where,

RGDP= Real gross domestic product (Proxy for Economic Growth)

CBC = Commercial bank credits to private sector

CBD= Commercial bank deposits

M2 = Broad money in ratio

INVT = Gross fixed credit formation proxy for investment

DIR = Minimum Deposit Interest rate

ALIR=Average lending interest rate

t= Year starting from 1991 G.C to 2020 G.C.

βo =Coefficient of Intercept

β_1 to B_6= Coefficient of Independent variables

U=Error Term

The equation will be re-written thus in line with the objectives of this study.

RGDP = *f* (M2, CBC, CBD, INVT, DIR,AIR)……..……. (1)

The model is specified as:

$RGDP_t = \beta o + \beta 1 Ln\ M2_t + \beta 2 Ln\ CBC_t + \beta 3 LnCMD_t + \beta 4 LnINVT_t + \beta 5 DIR_t + \beta 6 ALIR_t + U$... (2)

Table 2: Variable Indicator List

Variable	**Nature of the Variable**	**Indicator**
Economic Growth as proxy by RGDP	Dependent	Real Gross Domestic Product
CBC	Independent	Commercial banks credit to private sector
CBD	Independent	Commercial Bank Deposit
INVT	Independent	Investment
M_2	Independent	Broad Money
Average Lending Rate	Independent	Average Lending Interest rate
DIR	Independent	Minimum Deposit interest rate

Source: Researcher own computation.

3.4. Methods of Data Analysis

The study will use Multiple Linear Regression Model in order to check the financial intermediation roles of Ethiopian Commercial banks on economic growth. To analyze the data, statistical package STATA software version 12.1 has been used.

3.5. Validity and Reliability of the Research

The reliability and validity of a measure is not established by any single study but by the pattern of results across multiple studies. The assessment of reliability and validity is an ongoing process. However, attempt has been made to keep quality of the research starting from the model specification. Moreover, as part of the research process, validity and reliability has been checked using the in-built tools with the statistical software package. Robustness of the model has been attested using R^2 and adjusted R^2.

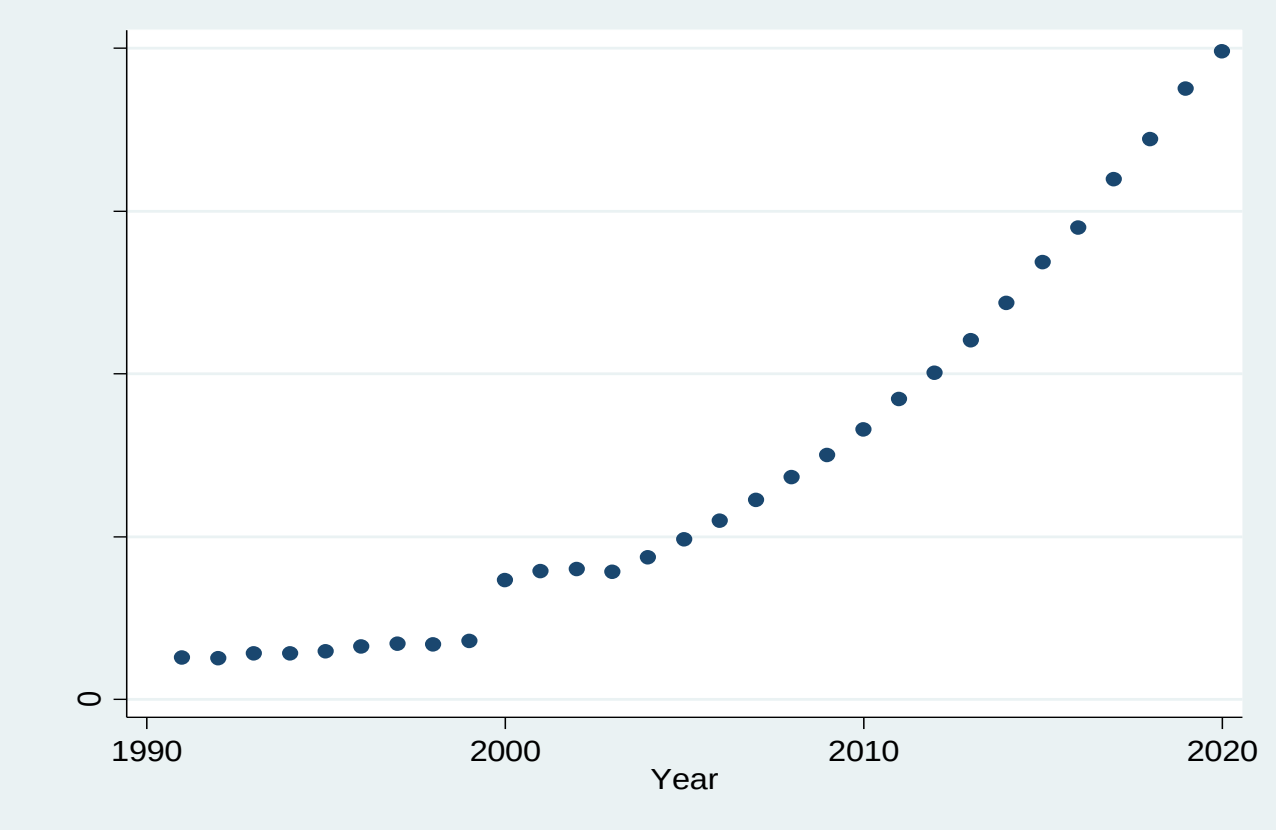
Stationery test has also been done to check that the value of the variable doesn't change with time i.e. variation in time does not serve as a factor which brings changes in the value of a variable using ADF. ADF test is also fundamentally a statistical significance test. The ADF test belongs to a category of tests called 'Unit Root Test', which is the proper method for testing the stationarity of a time series. Augmented Dickey Fuller test (ADF Test) is a common statistical test used to test whether a given Time series is stationary or not. It is one of the most commonly used statistical tests when it comes to analyzing the stationary of a series. DW test is also used to check stationarity.

CHAPTER FOUR

4. Discussions and Findings of the Study

This chapter of the research is dedicated to the analysis and interpretation of the study, which shows and explains the fitness of the adapted model, descriptive statistics analysis, and interpretation in relation to financial intermediation role of Ethiopian commercial banks and economic growth. RGDP of Ethiopia has shown growth as depicted in the graph below.

Figure 2: RGDP Trend for the Sample Period 1991-2020



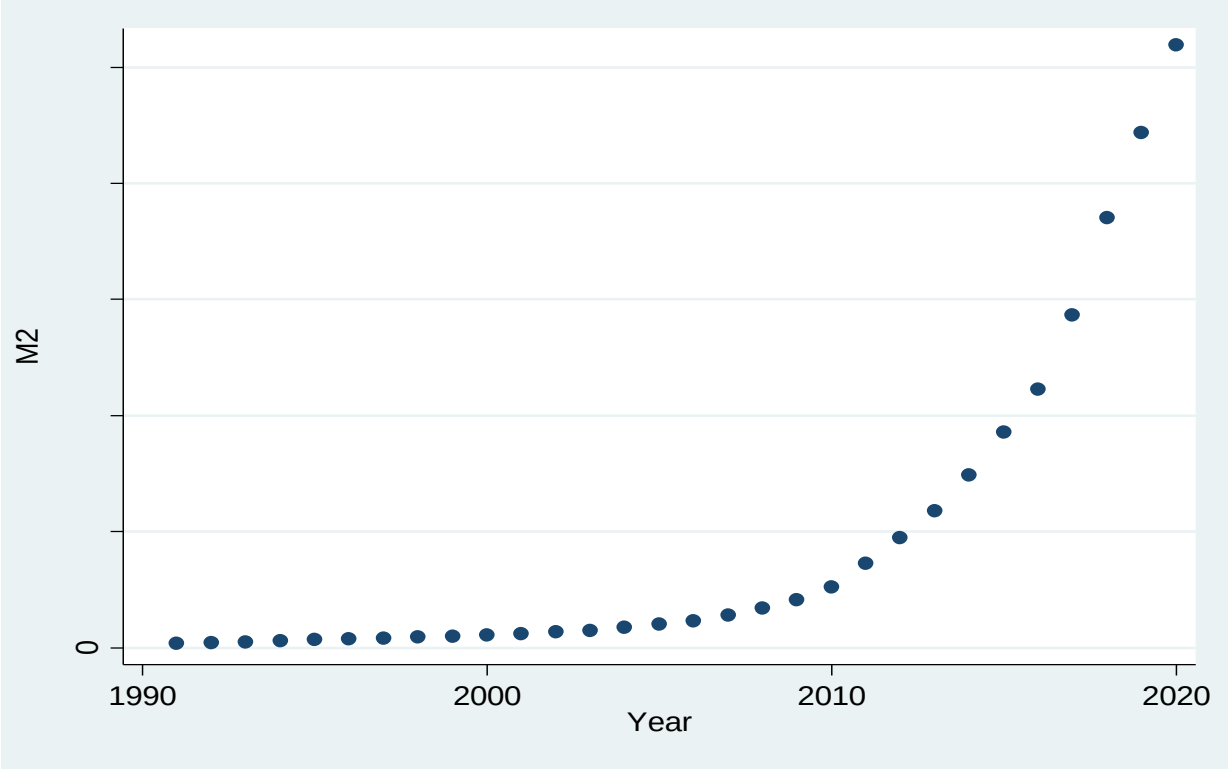
Source:-Researcher's Own Computation from the Raw Data

4.1. Discussion on the Independent and Explanatory Factors

4.1.1. Relationship Between Economic Growth and M_2

M_2 is a measure of the money supply that includes cash, checking deposits, and easily convertible near money. It is a broader measure of the money supply than narrow money, which just includes cash and checking deposits. Conventionally, M_2 is closely watched as an indicator of money supply and future inflation, and as a target of central bank monetary policy. The time series data for the sample period of 1991-2020 indicated that M_2 was steadily growing as depicted in the following graph.

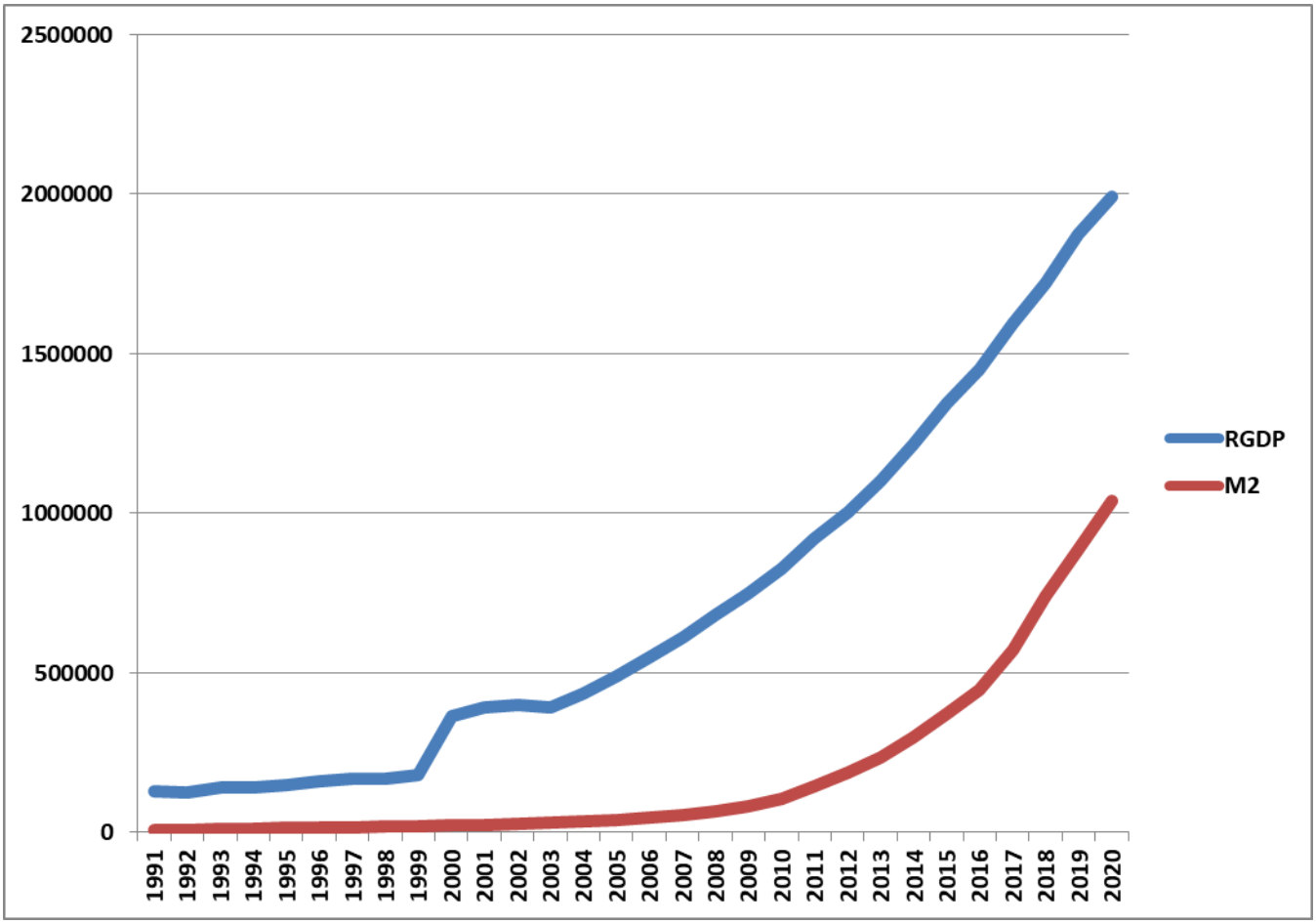
Figure 3: **M_2 Trend for the Sample Period 1991-2020**



Source:-Researcher's Own Computation from the Raw Data

On the other hand, RGDP and M_2 have been growing for the sample period of 1991-2020. There are some factors which tend to rise or fall in advance of the rest of the other economic factors among which is M_2, Boda, Martin & Zimková, Emília. (2018). Such factors determine the direction of the economy and also suggest the turning point of the economy. They provide the needed guidance or precursor to avoid been caught unexpectedly in a cyclical drawn back. However, during the sample period, it is not as such clearly observed in the Ethiopian context.

Figure 4: **RGDP and M2 Trend for the Sample Period 1991-2020**

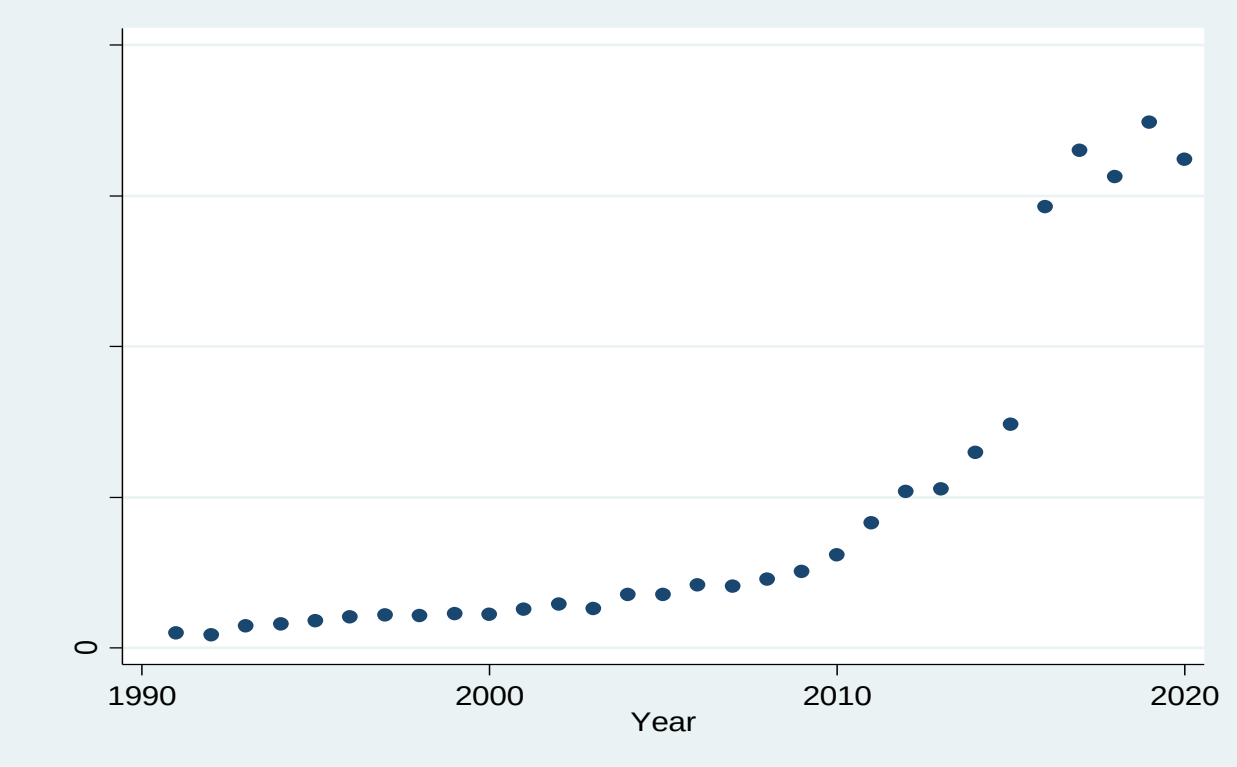


Source:-Researcher's Own Computation from the Raw Data

4.1.2. Relationship Between Economic Growth and Investment

Recent empirical studies have established linkages between investment and economic growth. Analysis of causality between economic growth and domestic investment conducted in different countries are marred with ambiguities and inconclusive results Tan B. W., & Lean H. H. (2010) and Beddies C.H. (1999). Ethiopia's gross investment as proxy by GFCF showed growth in the sample period of 1991-2020 as reflected in the below graph.

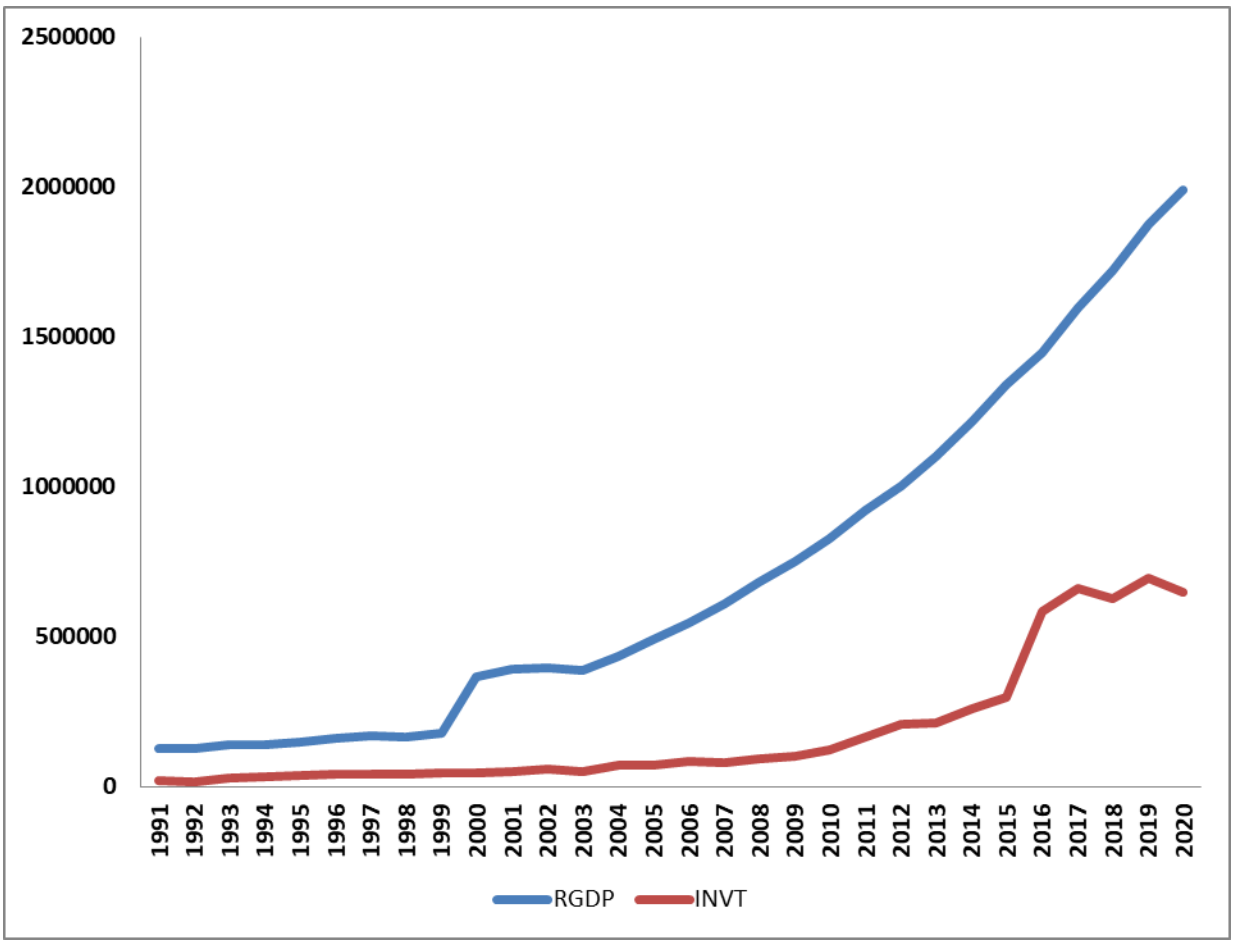
Figure 5: Gross Fixed Capital Formation Trend for the Sample Period 1991-2020



Source:-Researcher's Own Computation from the Raw Data

It has been explained the capital formation has positive and significant impact on economic growth, Tahir, S. H., Shehzadi, I., Ali, I. & Ullah, M. R. (2015). In the same logic, it is observed that RGDP and investment in Ethiopia during the sample period has been reviewed and depicted as follows.

Figure 6: RGDP and INV'T Trend for the Sample Period 1991-2020

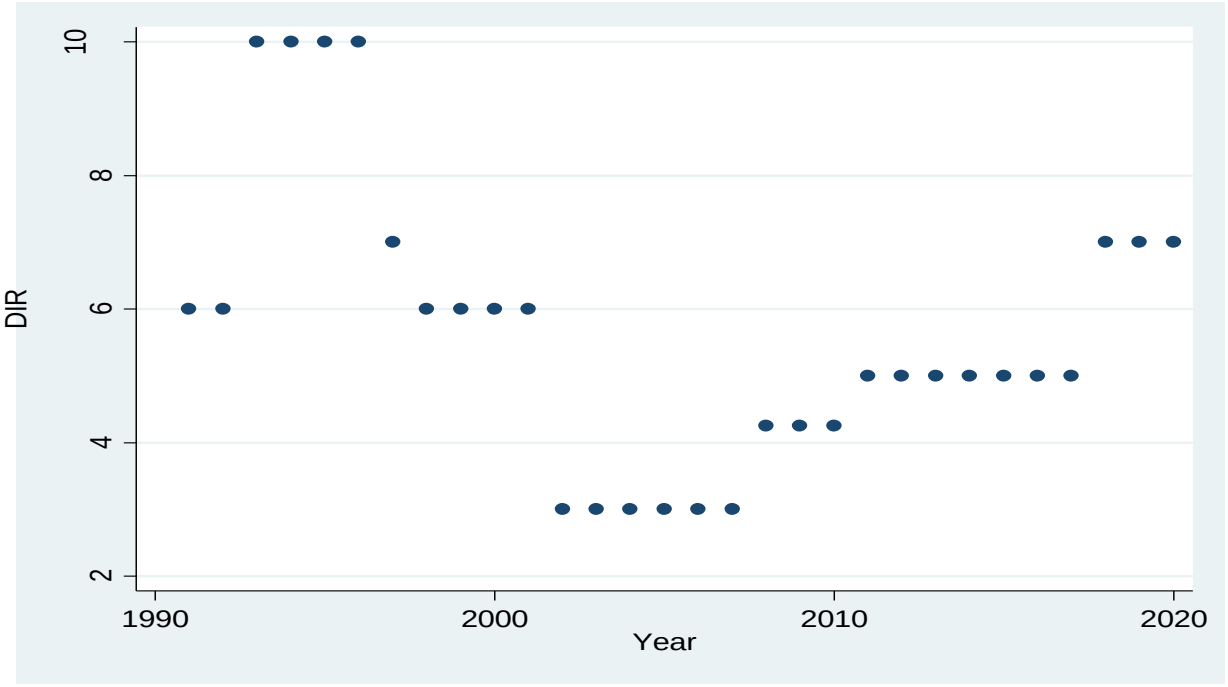


Source:-Researcher's Own Computation from the Raw Data

4.1.3. Relationship Between Economic Growth and Interest Rate

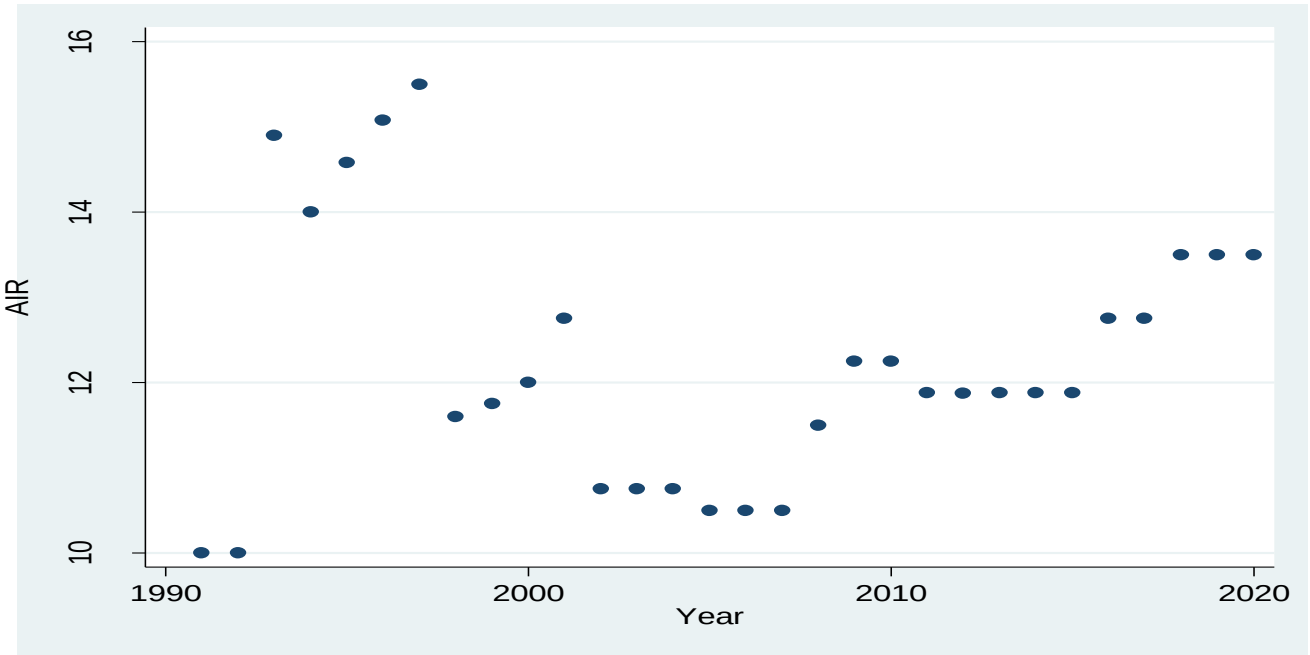
The economic growth rate can be impacted adversely by interest rates only in the short term, however, in the long term there are no clear relations between the lending rate and the growth rate of the economy Levine R, Loayza N, Beck T. (2000). In the long term, growth is significantly impacted by numerous variables like the productivity of the industry, the technology used, and the innovation by the industry, the taxation system, the efficiency of infrastructure and the framework of policies and procedures. As depicted in the following two figures, however, there is no clear relationship between Ethiopian deposit and lending interest rate and RGDP for the sample period.

Figure 7: Deposit Interest Rate Trend for the Sample Period 1991-2020



Source:-Researcher's Own Computation from the Raw Data

Figure 8: Trend of Average Lending Interest Rate Trend for the Sample Period 1991-2020

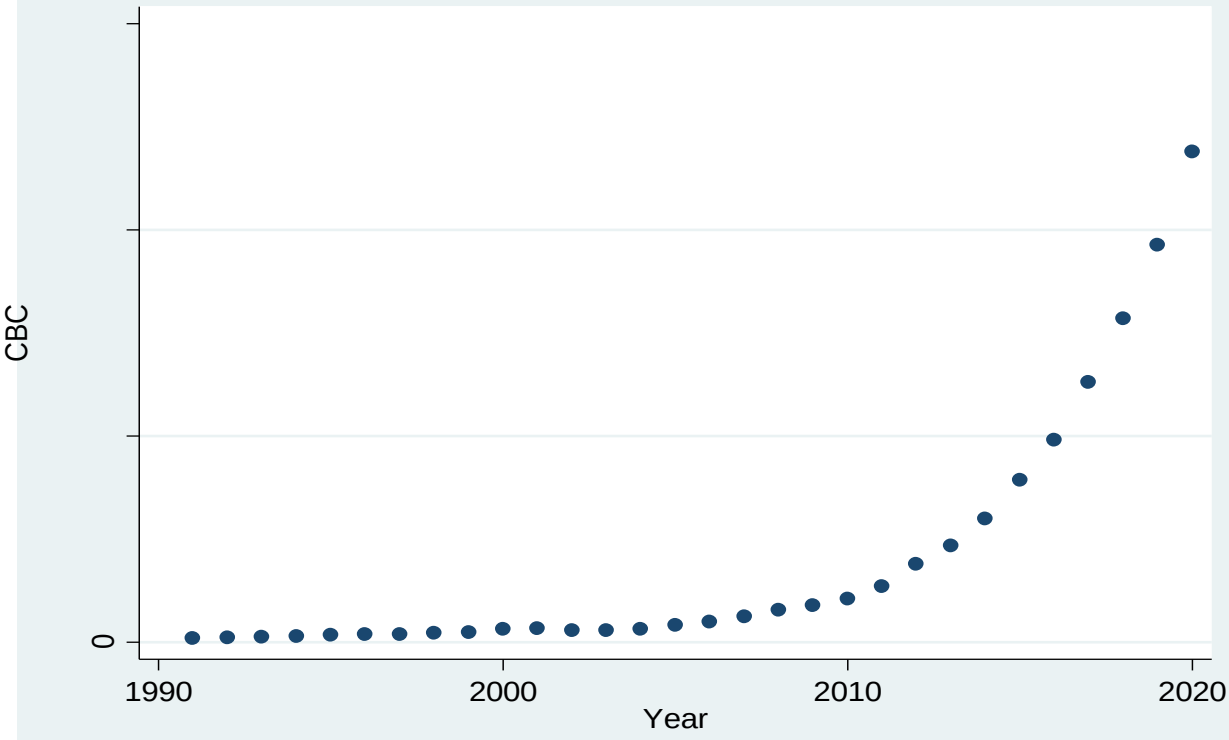


Source:-Researcher's Own Computation from the Raw Data

4.1.4. Relationship Between Economic Growth and Credit to Private Sector

The relationship between bank credit and economic growth has been an extensive subject of empirical research in both developing and under developing countries since the development of the innovation theory of Schumpeter (1911). In Schumpeterian world, bank credit plays a pivotal role in economic growth. Fundamentally, bank credit is defined as the aggregate amount of credit/funds provided by commercial banks to individuals, business organizations, industries and government. Individuals obtain credit for consumption and investment purposes, business organizations and industries borrow loans to invest in plant and machinery and in working capital, whereas government borrows loans to spend for recurrent as well as capital purposes Tahir, S. H., Shehzadi, I., Ali, I. & Ullah, M. R. (2015). Ethiopian commercial banks credit has been showing growth in the sample period 1991-2020. Especially, in the recent years, it showed high growth rate as revealed in the figure below.

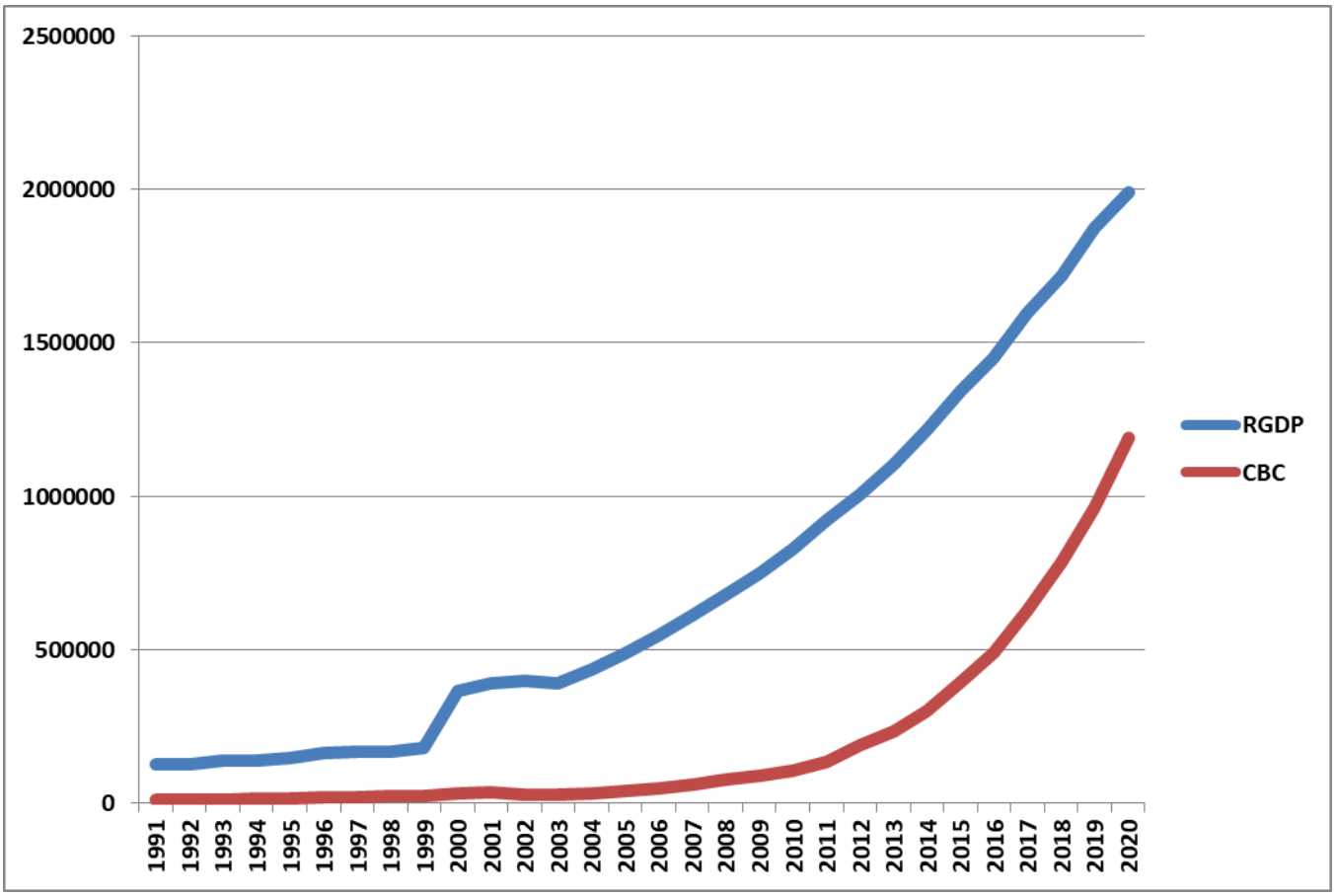
Figure 9: Trend of CBC for the Sample Period 1991-2020



Source:-Researcher's Own Computation from the Raw Data

In other words, bank credit finances production, consumption and capital formation, which further stimulates the economic growth, Levine R, Loayza N, Beck T. (2000). On the contrary, economic growth may encourage credit expansion through its demand for financial services.

Figure 10: Trend of RGDP and CBC for the Sample Period 1991-2020

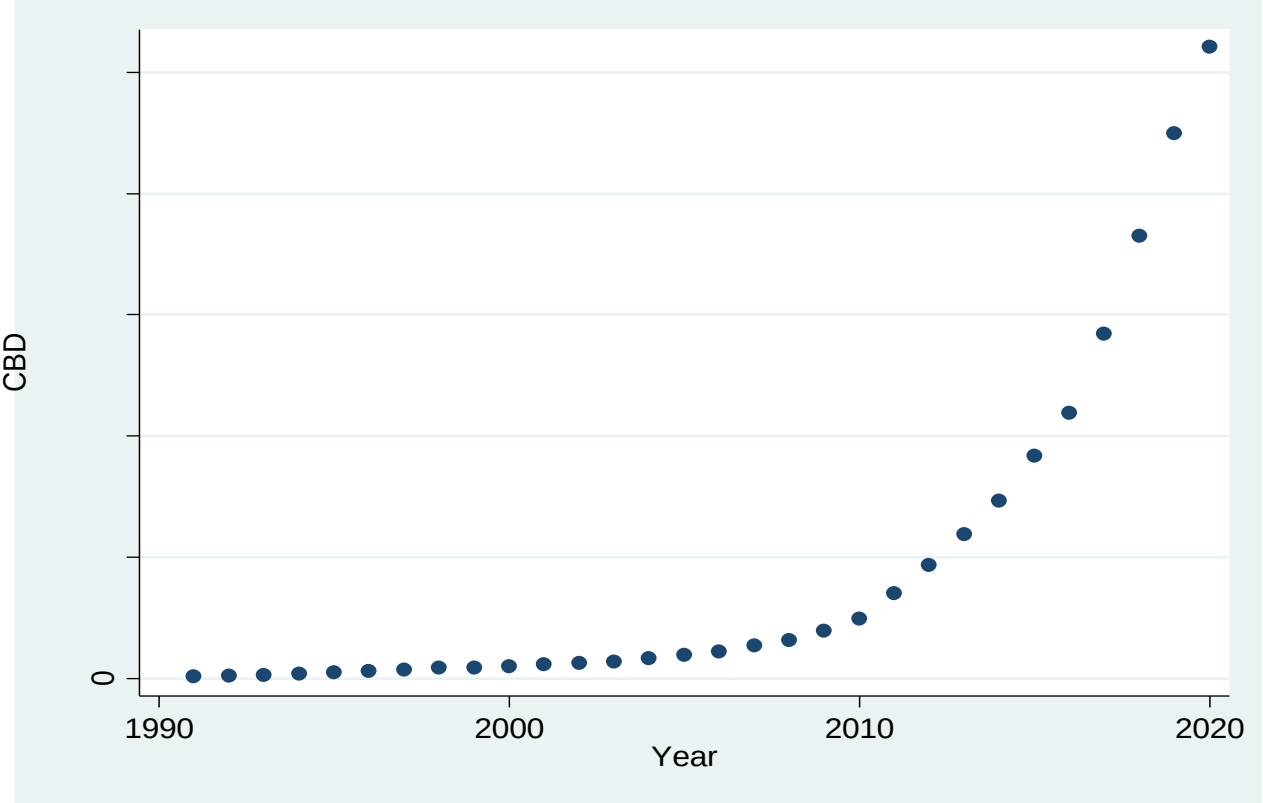


Source:-Researcher's Own Computation from the Raw Data

4.1.5. Relationship Between Economic Growth and Commercial Banks Deposit

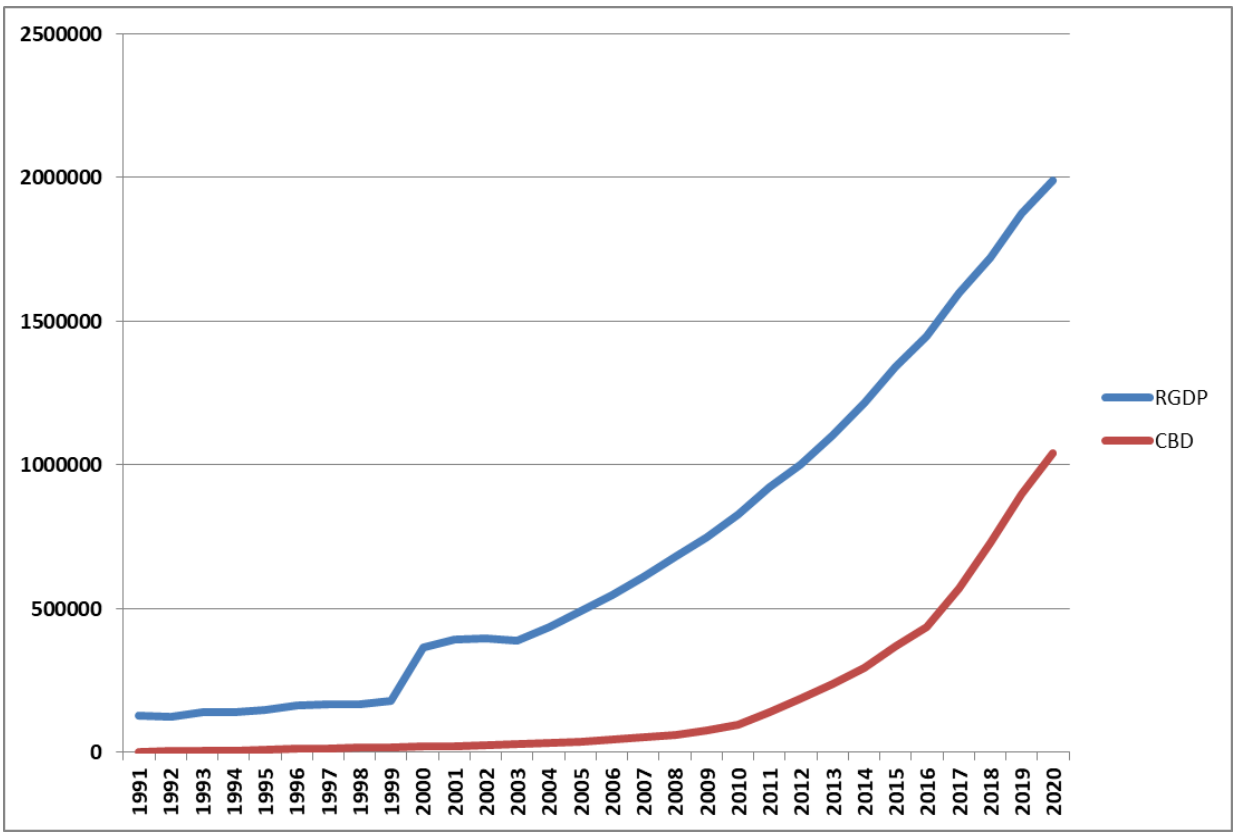
Commercial banks deposit liabilities only have immediate impact on capital formation and not on economic growth. However, the research findings support the notion that commercial banks are agents of both capital formation and economic growth of the country, Sanjib (2008). Deposit mobilization trend of Ethiopian commercial banks showed growth as depicted during the sample period of 1991-2020.

Figure 11: Ethiopian CBD for the Sample Period 1991-2020



Source:-Researcher's Own Computation from the Raw Data

Figure 12: Ethiopian CBD and RGDP for the Sample Period 1991-2020



Source:-Researcher's Own Computation from the Raw Data

4.2. Fitness and Significance of the Model

The first table of interest is the model summary. This table provides the R^2, adjusted R^2 and the root MSE of the estimate, which can be used to determine how well a regression model fits the data.

Table 3-: Model Summary

Source	SS	df	MS
Model	24.3647008	6	4.06078347
Residual	.598198247	23	.026008619
Total	24.962899	29	.860789622

Number of obs	30
F(6, 23)	156.13
Prob > F	0.0000
R-squared	0.9760
Adj R-squared	0.9698
Root MSE	.16127

Source: Own Computation of the Data using Stata/Output of the Regression using Stata

The "R Square" row represents the R^2 value (also called the coefficient of determination), which is the proportion of variance in the RGDP variable that is explained by the independent variables (CBD, M2, CBC, INVT, DIR, AIR). As we can understand from our value of 0.9760, our independent variables explain 97.60% of the variability of our dependent variable, RGDP. And 2.4% (100%-97.6%) of the variation is caused by factors other than the predictors included in this model. Moreover, the "Adjusted R Square" (adj. R2) is another important factor. A value of 0.9698 in the above table indicates true 96.98% of variation in the outcome variable is explained by the predictors which are to keep in the model. As we can understand, the discrepancy between the values of R-squared and Adjusted R Square is only 0.62% confirming that the robustness of the model.

The root MSE of the model is 0.16127 indicating that it is ignorable and too small. It is the root of mean square of error. It shows how wrong one could be if s/he used the regression model to make predictions or to estimate the dependent variable or variable of interest. As R^2 increases the error will decrease. Moreover, the error is used to get a confidence interval for the predicted values. Correlated predictors (multicollinearity) may cause large standard error of the estimate of the regression coefficient. Therefore, the R^2, adjusted $R^2$and root MSE revealed that the model is fit enough and robust to interpret the output of the multiple regressions. The explanatory variables of the specified model; CBD, M2, CBC, INVT, DIR, ALR are discovered to adequately explain roles of Ethiopian commercial banks to promote economic growth along the considered time horizon of 1991-2020. The F-ratio in the ANOVA tests whether the overall regression model is a good fit for the data. The table shows that the independent variables statistically significantly predict the dependent variable, $F(6, 23) = 156.13$, $p(.000) < .05$ (i.e., the regression model is a good fit of the data).

4.3. Unit Root Test

From the table below (Table 4), it is clearly shown that luckily the seven variables under study are stationary at zero order. Therefore,

Table 4-: Unit Root Test

Variable	ADF Test Statistic	P-value	Remark
LnRGDP	5.9300	1.0000	Stationary
LnCBD	16.9110	1.0000	Stationary
INVT	4.8180	1.0000	Stationary
LnM2	18.2900	1.0000	Stationary
LnCBC	37.0830	1.0000	Stationary
DIR	-4.4360	0.5651	Stationary
AIR	-3.6830	0.7710	Stationary

Source: Own Computation of the Data using ADF/Output of the Regression using Stata

Moreover, the DW test also reconfirms that the variables are luckily stationary at zero degree.

4.4. Estimated Model and Statistical Significance of the Independent Variables

Statistical significance of each of the independent variables tests whether coefficients are equal to 0 (zero) in the population (i.e. for each of the coefficients, H0: $\beta = 0$ versus Ha: $\beta \neq 0$ is conducted). If $p < .05$, the coefficients are statistically significantly different to 0 (zero). The usefulness of these tests of significance is to investigate if each explanatory variable needs to be in the model, given that the others are already there.

Table 5: **Coefficients of Estimated Model**

LnRGDP	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
LnCBD	.1369878	.2644454	0.52	0.609	-.4100591	.6840348
LnINVT	-.2932403	.2300713	-1.27	0.215	-.7691789	.1826984
LnM2	.3008089	.4640759	0.65	0.523	-.6592052	1.260823
LnCBC	.3224476	.3742893	0.86	0.398	-.4518287	1.096724
DIR	-12.34549	4.053198	-3.05	0.006	-20.73017	-3.960812
AIR	6.108651	4.957903	1.23	0.230	-4.147553	16.36485
_cons	8.004154	.8512797	9.40	0.000	6.243147	9.76516

Source: Output of Multiple Time Series using Stata

Given that, the t-value and corresponding p-value are in the "t" and "p>t" Columns (Table 5), respectively. The tests tell us that CBD (.609), INVT(0.215), M2 P(0.523), CBC(0.398), and AIR(0.230) > 0.05 are not significant. Only DIR (0.00) < 0.05 is significant.

The general form of the equation to predict role of Ethiopian commercial banks in impacting on RGDP is estimated to be:

$$\widehat{LnRGDP} = 8+0.14LnCBD -0.291LnINVT + 0.30LnM2 + 0.32LnCBC-12DIR+6AIR\ldots\ldots\ldots \textbf{(3)}$$

Constant 8, is the predicted value for the dependent variable of RGDP in the country if all independent variables, CBD = 0, INVT=0, CBD = 0, M2=0, DIR=0, and AIR=0. That is, the country will only have a RGDP to the tune of ETB eight million when all predictor variables take the value 0. For this reason, this is only a meaningful interpretation if it is reasonable that the predictors can take the value 0 in practice.

The coefficients indicate how much the dependent variable varies with an independent variable when all other independent variables are held constant. The regression coefficient provides the expected change in the dependent variable (RGDP) for a one-unit increase in the independent variable. Referring to the coefficients (Table 5) above the coefficient for CBD is 0.14. This means for every unit increase (one ETB increase) in deposit of commercial banks, there will be s possibility to increase RGDP of the country by 0.14 and the same logic applies to the other explanatory variables as well.

4.5. Interpretation of Co-efficient and Ethiopian Commercial Banks Financial Intermediation Roles

Zero order correlations are the bivariate correlation between the predictors and the dependent variables. Both commercial banks' deposit and credit to private sectors exhibited a positive direct contribution on economic growth although they are not as such statistically significant during the sample period. However, the financial intermediation role of commercial banks through investment seems questionable as the coefficient of INVT is negative. This result is against the expected positive relationship between economic growth and investment highlighting further investigation in the future.

On the other hand, during the sample period of 1991-2020, M_2 had evidenced a positive contribution to the economic growth though statistically insignificant. This may reflect the extent of monetary policy effectiveness in the country. The other interesting finding of the study is that average lending interest rate had a positive coefficient against priori expectation of inverse relationship. Finally, it is evidenced that the minimum deposit interest rate has a negative co-efficient and hence positively contributing for economic growth.

CHAPTER FIVE

5. Conclusion and Recommendation

5.1. Conclusion

The analysis of roles of commercial banks financial intermediation in an economy is complex as its determinant is the combination of many involved variables according to their contribution to the growth rate of Gross Domestic Product. From the time series data, it is learnt that RGDP, M_2 INVT, CBD and CBC have been steadily growing the sample period. After having reviewed pertinent literatures and specified suitable model; however, multiple time series regression has been run using **Stata**. From the output of the multiple regressions, real gross domestic product (RGDP) of the country was predicted from CBD, CBC, M_2, INVT, DIR and AIR taking the last thirty years data into account.

In the process, an attempt has been done to check the financial intermediation roles of Ethiopian commercial bank on economic growth. The model statistically significantly predicted RGDP as independent variables statistically significantly predict the dependent variable, F (6, 23) = 156.13, p (.000) < .05 (i.e., the regression model is a good fit of the data). Moreover, the independent variables explain 97.60% of the variability of our dependent variable, RGDP and witnessed by R^2 and Adjusted R^2 is also found to be 96.98%. Out of the six predictor variables, CBD (.609), INVT(0.215), M2 P(0.523), CBC(0.398), and AIR(0.230) > 0.05 are not significant. Only DIR (0.00) < 0.05 is significant.

It is evident that in the sample period, Ethiopian commercial banks have positively been contributing for economic growth through their financial intermediation roles of deposit

mobilizations and extension of loans to the private sector. Moreover, the broad money, M_2 has also been playing a positive role in enhancing economic growth.

However, the output of the time series regression model indicated that financial intermediation roles of Ethiopian commercial banks are not positively and significantly contributing for economic growth through fixed capital formation. This finding may imply that business focus Ethiopian commercial banks are mostly non-investments, which calls for policy intervention. Therefore, the specified model and subsequent output of the multiple regressions revealed mixed results as to the financial intermediation roles of Ethiopian commercial banks on economic growth.

5.2. Recommendation

In lieu of the findings of the research, the following key recommendations are drawn to enhance Ethiopian economic growth. Ethiopian Commercial banks deposit mobilization has learned to positively impact on economic growth in the sample periods implying to design appropriate strategies at national as well as at an individual commercial bank level to improve the current level of saving rate. The strategy may focus on improving saving culture of the society by engaging concerned government organs and deploying innovative services including expanding its network further in to the rural areas.

In a bid to further enhance financial intermediation role of Ethiopian commercial banks and hence promote economic growth, efforts should be made by the NBE to effectively manage the banks' lending interest rate. These policy thrusts will most likely result into increased investment activities which will enhance capital formation in Ethiopia. Moreover, Ethiopian commercial banks credit to private sector shall also deliberately be targeted to improve their financing portfolio of investment.

The co-efficient of M_2 is positive implying its contribution for economic growth. However, it is not statistically significant. The possible implication and hence recommendation will be money supply in the economy shall be well managed for M2 to be statistically significantly contribute for the economy. Finally, further research may be carried out to investigate the non-conformity of the coefficient investment and lending rate of Ethiopian commercial banks to the expectation of having a positive and negative relationship with RGDP.

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6.2. Annexes

i. Data for the Research

Year	RGDP in ETB mil.	CBD in EBT Mil.	INVT in ETB Mil.	M2 in ETB Mil.	CBC in ETB Mil.	DIR in %	AIR %
1991	128,347.23	3,487.46	19,684.30	7,962.20	10,149.50	6.00	10.00
1992	125,406.28	4,592.08	16,754.46	9,010.90	11,479.50	6.00	10.00
1993	139,411.50	5,898.22	29,026.61	10,136.69	12,907.10	10.00	14.90
1994	139,480.18	7,436.95	31,468.85	11,598.71	14,573.30	10.00	14.00
1995	147,454.54	10,109.15	35,957.63	14,408.47	16,840.80	10.00	14.58
1996	162,373.14	12,093.99	40,856.44	15,654.81	19,384.00	10.00	15.08
1997	169,246.88	13,965.50	43,065.05	16,551.85	19,803.40	7.00	15.50
1998	167,917.47	17,705.15	42,820.90	18,585.30	22,050.80	6.00	11.60
1999	178,512.68	17,864.71	44,833.87	19,398.96	23,942.70	6.00	11.75
2000	364,984.33	20,384.09	44,195.48	22,177.77	31,283.70	6.00	12.00
2001	392,058.84	23,148.39	50,811.48	24,516.21	34,035.10	6.00	12.75
2002	398,464.76	25,030.88	57,784.27	27,321.96	28,098.96	3.00	10.75
2003	390,102.91	27,977.28	52,049.64	30,090.06	28,689.43	3.00	10.75
2004	435,859.45	32,677.89	70,593.37	34,655.87	31,652.96	3.00	10.75
2005	490,970.44	38,530.33	70,718.50	40,212.06	40,873.53	3.00	10.50
2006	547,625.36	44,458.91	83,153.02	46,377.38	49,298.60	3.00	10.50
2007	612,217.20	53,865.20	81,345.91	56,651.89	61,846.88	3.00	10.50
2008	680,706.93	62,956.30	91,085.66	68,182.14	78,475.08	4.25	11.50
2009	749,058.85	78,151.99	100,693.33	82,509.75	89,205.89	4.25	12.25
2010	828,212.74	98,633.34	123,117.54	104,432.40	104,416.17	4.25	12.25

2011	922,512.81	140,531.76	165,379.70	145,376.97	135,558.56	5.00	11.88
2012	1,002,766.88	187,290.65	207,608.27	189,398.78	189,122.06	5.00	11.88
2013	1,102,467.82	237,201.34	210,908.35	235,313.59	233,406.35	5.00	11.88
2014	1,216,015.26	292,847.89	259,172.96	297,746.59	299,729.65	5.00	11.88
2015	1,342,555.90	367,395.43	296,900.88	371,328.91	393,439.76	5.00	11.88
2016	1,449,397.45	438,152.72	585,665.00	445,266.25	490,230.38	5.00	12.75
2017	1,596,481.63	568,818.74	659,734.08	573,384.05	631,092.76	5.00	12.75
2018	1,719,491.33	730,257.74	625,312.81	740,572.88	784,621.75	7.00	13.50
2019	1,874,689.30	899,628.42	697,695.60	886,752.53	963,699.94	7.00	13.50
2020	1,990,000.00	1,041,410.30	648,553.10	1,037,646.33	1,190,705.35	7.00	13.50

Source: Own Computation form the raw data

6.3. Appendices

i. Summary of Descriptive Statistics

Variable	Observation	Mean	Standard Deviation	Minimum	Maximum
RGDP	30	715493	578,281.20	125,406.30	1,990,000.00
CBD	30	183416.8	281,378.70	3,487.46	1,041,410.00
INVT	30	182898.2	221,454.80	16,754.46	697,695.60
M2	30	186107.4	279,992.20	7,962.20	1,037,646.00
CBC	30	201353.8	309,510.60	10,149.50	1,190,705.00
DIR	30	5.658333	2.16	3.00	10.00
AIR	30	12.2435	1.53	10.00	15.50

Source: Extracted from the Output of Stata

ii. Time Series Multiple Linear Regression Output

```
. regress LnRGDP LnCBD LnINVT LnM2 LnCBC DIR AIR
```

Source	SS	df	MS		
Model	24.3647008	6	4.06078347	Number of obs	= 30
Residual	.598198247	23	.026008619	F(6, 23)	= 156.13
				Prob > F	= 0.0000
				R-squared	= 0.9760
				Adj R-squared	= 0.9698
Total	24.962899	29	.860789622	Root MSE	= .16127

LnRGDP	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
LnCBD	.1369878	.2644454	0.52	0.609	-.4100591	.6840348
LnINVT	-.2932403	.2300713	-1.27	0.215	-.7691789	.1826984
LnM2	.3008089	.4640759	0.65	0.523	-.6592052	1.260823
LnCBC	.3224476	.3742893	0.86	0.398	-.4518287	1.096724
DIR	-12.34549	4.053198	-3.05	0.006	-20.73017	-3.960812
AIR	6.108651	4.957903	1.23	0.230	-4.147553	16.36485
_cons	8.004154	.8512797	9.40	0.000	6.243147	9.76516

Source: Extracted from the Output of Stata

iii. Summary of Covariance and Correlation

	LnRGDP	LnCBD	LnINVT	LnM2	LnCBC	DIR	AIR
LnRGDP	1.0000						
LnCBD	0.9731	1.0000					
LnINVT	0.9478	0.9882	1.0000				
LnM2	0.9658	0.9954	0.9905	1.0000			
LnCBC	0.9572	0.9912	0.9894	0.9977	1.0000		
DIR	-0.4173	-0.2746	-0.1973	-0.2331	-0.1953	1.0000	
AIR	-0.0743	0.0632	0.1349	0.0735	0.1011	0.8029	1.0000

Source: Extracted from the Output of Stata

iv. ADF Test Result

dfuller RGDP, lags(0)

Dickey-Fuller test for unit root Number of obs = 29

---------- Interpolated Dickey-Fuller ---------

Test Statistic	1% Critical Value	5% Critical Value	10% Critical Value
Z(t) 5.930	-3.723	-2.989	-2.625

MacKinnon approximate p-value for Z(t) = 1.0000

. dfuller CBD, lags(0)

Dickey-Fuller test for unit root Number of obs = 29

---------- Interpolated Dickey-Fuller ---------

Test Statistic	1% Critical Value	5% Critical Value	10% Critical Value
Z(t) 16.911	-3.723	-2.989	-2.625

MacKinnon approximate p-value for Z(t) = 1.0000

. dfuller INVT, lags(0)

Dickey-Fuller test for unit root Number of obs = 29

---------- Interpolated Dickey-Fuller ---------

Test Statistic	1% Critical Value	5% Critical Value	10% Critical Value
Z(t) 4.818	-3.723	-2.989	-2.625

MacKinnon approximate p-value for Z(t) = 1.000

. dfuller M2, lags(0)

Dickey-Fuller test for unit root Number of obs = 29

---------- Interpolated Dickey-Fuller ---------

Test Statistic	1% Critical Value	5% Critical Value	10% Critical Value

---

Z(t)	18.290	-3.723	-2.989	-2.625

MacKinnon approximate p-value for Z(t) = 1.0000

. dfuller CBC, lags(0)

Dickey-Fuller test for unit root Number of obs = 29

---------- Interpolated Dickey-Fuller ---------

Test	1% Critical	5% Critical	10% Critical
Statistic	Value	Value	Value

Z(t)	37.083	-3.723	-2.989	-2.625

MacKinnon approximate p-value for Z(t) = 1.0000

. dfuller DIR, lags(0)

Dickey-Fuller test for unit root Number of obs = 29

---------- Interpolated Dickey-Fuller ---------

Test	1% Critical	5% Critical	10% Critical

	Statistic	Value	Value	Value
Z(t)	-4.436	-3.723	-2.989	-2.625

MacKinnon approximate p-value for Z(t) = 0.5651

. dfuller AIR, lags(0)

Dickey-Fuller test for unit root Number of obs = 29

---------- Interpolated Dickey-Fuller ---------

	Test Statistic	1% Critical Value	5% Critical Value	10% Critical Value
Z(t)	-3.683	-3.723	-2.989	-2.625

MacKinnon approximate p-value for Z(t) = 0.0771