



**Addis Ababa University
College of Business and Economics**

**The Contribution of Commercial Banks to Economic Growth of
Ethiopia**

By: Abraham Desta

**A thesis Submitted to the Addis Ababa University, College of Business and
Economics in Partial Fulfillment of the requirement for the Degree of Masters of
Business Administration in Financial Service**

Advisor: Dr. Degefa Duressa

MAY, 2018

Addis Ababa

**Addis Ababa University
College of Business and Economics**

**The Contribution of Commercial Banks to Economic Growth of
Ethiopia**

By: Abraham Desta

**A thesis Submitted to the Addis Ababa University, College of Business and
Economics in Partial Fulfillment of the requirement for the Degree of Masters of
Business Administration in Financial Service**

Advisor: Dr. Degefa Duressa

MAY, 2018

Addis Ababa

Statement of Declaration

I, Abraham Desta, hereby declare that a research entitled “**The Contribution of Commercial Banks to Economic Growth of Ethiopia**” submitted by me for award of the degree of Master of Business Administration of Addis Ababa University, is original work and it hasn't been presented for the award of any Degree, Diploma, Fellowship or other similar titles of any other university or institution.

Abraham Desta

Signature_____

Date_____

Statement of Certification

This is to certify that thesis entitled, “The Contribution of Commercial Banks for Economic Growth”, undertaken by Abraham Desta for Partial fulfillment of Degree of Master of Business Administration at Addis Ababa University, to the best of my knowledge, is an original work and is suitable for submission for the reward of the MBA.

Advisor Dr. Degefa Duressa

Signature_____

Date_____



**Addis Ababa University
College of Business and Economics**

**The Contribution of Commercial Banks to Economic Growth of
Ethiopia**

By: Abraham Desta

Approved by Board of Examiners

Chairman, Department of graduate committee

Advisor

__DR_DEGEFA_DURESSA_____

Examiner

__DR__LEMESSA

DR TEKALEGN_____

Acknowledgement

First and foremost I would like to thank my thesis advisor Dr. Degefa Duressa for the opportunity to pursue this project and for his guidance, patience and invaluable ideas that enabled this research to be successfully completed.

My special appreciation also goes to my wife and children for their support and moral and also the management and staff member of Commercial Banks and National bank for their cooperation in in providing me all the necessary data required for the study.

Finally, I wish to acknowledge Commercial Bank of Ethiopia for granting me this prestigious scholarship that has made it all possible. I have attained unfathomable knowledge and skill

TABLE OF CONTENT

Contents	Pages
Statement of Declaration	III
Statement of Certification	IV
Approval Page	V
Acknowledgment	VI
List of Table	IX
List of Figure	X
Abstract	XI
Acronym	XII
1. Introduction	
1.1. Background of the study	1
1.2. Statement of the problem	5
1.3. Research questions	6
1.4. Hypothesis of the study	7
1.5. Research Objectives	
1.5.1. General objective of the study	7
1.5.2. Specific objectives of the study	7
1.6. Scope of the study	8
1.7. Organization of the study	8
2 Review of related literature.....	9
2.1. Theoretical Review	9
2.1.2. Empirical review	12
2.1.2.1. Financial development and economic growth relationship	12
2.1.2.2. Access to financial resources and services as part of financial development	15

2.1.2.3. Financial development indicators	15
2.1.2.4. Banking sector and economic development	16
Contents	Pages
2.1.2.5. Indicators of commercial banking sector development	17
2.1.2.6. The theory of financial intermediaries	28
2.1.3. Conceptual framework.....	29
3. Research methodology and design	30
3.1. Introduction.....	30
3.1.1. Research design	30
3.1.6.1. Source of data	33
3.1.6.2. Population of the study	33
3.1.6.3. Data collection instruments.....	33
3.1.6. Data collection instrument	33
3.1.2. Unit root test and stationary test	31
3.1.3. Co integration procedure.....	32
3.1.5. Granger test.....	32
3.1.7. Definition of variables	33
4. Data testing, analysis and discussion of result	34
4.1 .1 Descreptive Statistics	34
4.1.2 Unit Root Test.....	36
4.1.3 Granger Casuality Test	37
4.1.4 Serial Correlation Test	39
4.1.5 Test of Hetroskedasticity	40
4.1.6 Test of Normality	41
4.2 Emperial analysis and discussion of Result	42
4.2.1 Discussion of each variable	44
5. Conclusion and Recommendation.....	46

5.1 Conclusion	46
5.2 Recommendation	48
References	49
Annex	51

List of Tables

Tables	pages
Table 4.1 Unit root Test	35
Table 4.2 Granger Causality Test	36
Table 4.3 Serial Correlation Test	37
Table 4.4 Descriptive Statistics.....	38
Table 4.5 Test of Hetrosecedacity	40
Table 4.6 Regression Table.....	41

List of Figures

Figures.....	pages
Figure 1 Conceptual Framework	29
Figure 4.1 Test of Normality	39

Abstract

The research investigates the contribution of Commercial Banks to economic growth of Ethiopia, the study uses the data of commercial banks in Ethiopia from 2001-2017, the study conducted with time series data using Eviews 9. The dependent variable is RGDP and the independent variables are four (DEPOSIT, PROFIT, LOAN AND TOTAL ASSET) return on asset is as a proxy for profit and total asset is taken as a proxy for size To test the model ADF test for stationary, LM test for Serial correlation ,Bruechpegan test for hetrosekedascity ,Jargue Bera test for normality and Granger causality test for causality finally I am using two stage OLS regression model .The variables are become stationery at second difference. All variables are free from serial correlation, heterosekedascity and normally distributed. The Granger causality test has shown that there is bi directional cause means all the independent variables influence the dependent variable in one direction and on the regression I have found that all variables affect the economic growth significantly but the three variables loan, asset and deposit contribute positively to RGDP, profit by proxy of ROA is negatively affect the growth .

ACRONYMS

(ADF) : Augmented Dickey Fuller

CBE :Commercial Bank of Ethiopia

DBE : Development Bank of Ethiopia

GDP: Gross Domestic Product

MOFED: Ministry of Finance and Economic Development

NBE: National Bank of Ethiopia

OECD: Organization for Economic Cooperation and Development

OLS : Ordinary Least Squares

RGDP: Real Gross Domestic Product

ROA : Return on Asset

ROE Return on Equity

SSA: Sub-Saharan Africa

Unit one

Introduction

1.1. Background of the study

The financial sector provides positive avenues in several fields which indirectly increase people's standards of living and reduce the poverty level; a well-developed financial sector may increase investments, which can promote economic growth. (Boyd and Prescott 1986) According to Boyd and Prescott (1986), these principles identified two important roles performed by financial intermediaries. Firstly, the financial intermediaries identify the best production technologies and reduce the costs of acquiring and processing information which improves resource allocation. Secondly, they boost the rate of technological innovation by identifying those entrepreneurs with the best chances of successfully initiating new goods and production processes.

The definition of the financial sector includes mainly formal financial intermediaries in Ethiopia's financial system, specifically commercial banks that meet the definition of financial depository institutions. The financial system is a channel through which financial development influences growth and sound financial system is characterized by healthy financial institutions and smooth, well-functioning financial markets which jointly allow for robustness and resilience in the face of adverse shocks (OECD, 2010; Estrada, Park, and Ramayandi, 2010). Access to financial services is another dimension of financial development, although it is not widely covered in this study. The lack of access to finance can be a serious barrier to investment and business growth and impedes the setting up of businesses essential for the growth of a dynamic economy. In an inefficiently functioning banking system, it is hard for savings to be mobilized and normally accumulated outside of the banking system, where they are not effectively used for capital formation and growth of the economy.

Commercial banks as part of a legal financial structure play a significant role in the transmission process. Therefore, financial development needs to bridge the gap between the formal financial institutions and rural households' financial needs (Levine, 2003). In general, commercial banks in Ethiopia follow these principles by both extending credit to the private sector and identifying

the most successful entrepreneurs whose initial activities support growth. By identifying the effects of these channels through which finance affects growth, this research will review on the contribution of commercial banks in Ethiopia for economic growth.

The Ethiopian economy which had exhibited 9.8 percent average annual growth during 2010/11-2015/16, registered 8 percent growth in 2015/16 despite challenging macroeconomic and weather conditions. (NBE 2015/16) The 8 percent real GDP growth was 3.2 percentage point lower than 1.6 percent average growth estimated for Sub - Saharan Africa (World Economic Outlook Update, July 2016). The growth in real GDP was mainly attributed to 8.7 percent growth in services, 2.3 percent in agriculture and 20.6 percent in industrial sectors (NBE). Nominal GDP per capita raised to USD 794 from USD 725 a year earlier depicting 9.5 percent improvement. The Ethiopian economy is targeted to grow 11.1 percent in 2016/17 in contrast to 3.8 and 5.1 percent growth forecast of the IMF for the world and Sub-Saharan Africa (SSA), respectively (WEO, July 2016). In 2015/16, the agricultural sector exhibited slower growth rate of 2.3 percent compared with 8.2 percent target mainly due to contraction in grain crop production (mofed) largely on account of Elino effect. The total grain production reached 266.8 million quintals, of which cereal production accounted for 86.7 percent, pulses 10.4 percent and oil seeds 2.9 percent. Cereals production went down by 2 percentage point over the preceding year owing to 1.7 percent reduction in cultivated land area. In contrast, the production of pulses and oilseeds improved by 3.6 and 3.3 percent while cultivated land area expanded by 6.1 and 0.4 percent, respectively during the same period (mofed). The total land cultivated for crop production slightly declined by 0.6 percent to 12.5 million hectares, of which cereals production covered 79.9 percent, pulses 13.2 percent and oil seeds 6.9 percent (NBE 2015/16). The share of agriculture in GDP in 2015/16 went down to 36.7 percent from 38.7 percent a year earlier; In 2015/16, the agricultural sector exhibited slower growth rate of 2.3 percent compared with 8.2 percent target mainly due to contraction in grain crop production (mofed) largely on account of Elion effect. The total grain production reached 266.8 million quintals, of which cereal production accounted for 86.7 percent, pulses 10.4 percent and oil seeds 2.9 percent. Cereals production went down by 2 percentage point over the preceding year owing to 1.7 percent reduction in cultivated land area. In contrast, the production of pulses and oilseeds improved by 3.6 and 3.3 percent while cultivated land area expanded by 6.1 and 0.4 percent, respectively during the same period The total land cultivated for crop production slightly declined by 0.6

percent to 12.5 million hectares, of which cereals production covered 79.9 percent, pulses 13.2 percent and oil seeds 6.9 percent. The lion's share of agricultural sector was crop production, comprising 71.9 percent, followed by animal farming & hunting (19.5 percent) and forestry (8.4 percent). In terms of growth rate, crop and forestry increased by 3.4 and 2.2 percent, respectively; while animal farming & hunting went down by 1.5 percent (NBE 2016).

Industrial sector showed a 20.6 percent annual growth and accounted for 16.7 percent of GDP. The sector contributed 38.8 percent to the economy Manufacturing sector increased by 18.4 percent and constituted about 32.4 percent of industrial output. Construction industry, on the other hand, contributed more than half (56.8 percent) to industrial sector and expanded by 25 percent signifying the leading role the construction sector plays in terms growing expansion of roads, railways, dams and residential houses.

Electricity & water and mining & quarrying had 6.3 and 4.5 percent contribution to industrial production, respectively. Service sector continued to dominant the economy as its share in GDP rose to about 47.3 percent and its contribution to GDP growth was about 50 percent meaning, half of the country's economic growth was attributed to service sector (). This was largely owing to the expansion of wholesale & retail trade (8.2 percent), real estate, renting & business activities (3.7 percent) and hotels & restaurant (15.6 percent)

In 2015/16 the number of banks declined to 18 from 19 due to the merger of Construction & Business Bank with Commercial Bank of Ethiopia. Of the 18 banks 16 were private and 2 public. Banks opened 494 new branches in 2015/16 (of which 363 were private) raising the total branch network to reach 3187 from 2693 last year. As a result, bank branch to population ratio declined from 1:33,448 people to 1:28,932 in 2015/16. The share of public banks, in total branches declined to 39.5 percent from 41.9 percent last year signifying the growing role of private banks about 34.4 percent of bank branches were situated in Addis Ababa. The total capital of the banking system rose 39.8 percent to Birr 43.0 billion by end June 2016 (NBE).

In the meantime, the number of insurance companies stood at 17 (1 public and 16 private) with their branches rising to 426 following the opening of 49 new branches. About 53.5 percent of insurance branches were in Addis Ababa and 83.6 percent of the total branches were private. At

the same time, the total capital of insurance companies grew 25.3 percent to Birr 3.6 billion of which the share of private insurance companies was 76.7 percent.

Total resources mobilized by the banking system (deposit, loan collection and borrowing) rose by 8.0 percent and reached Birr 149.6 billion by end 2015/16. As commercial banks expanded their branch network, their deposit liabilities increased to Birr 438.1 billion showing a 19.3 percent annual growth. Saving deposits grew by 24.2 percent followed by time deposits (18.6 percent), and demand deposits (13.7 percent). Saving deposits accounted for 49.5 percent of the total deposits distantly followed by demand deposits (39.0 percent) and time deposit (11.4 percent). The share of private banks in deposit mobilization increased to 33.6 percent from 32.2 percent last year due to the opening of 363 new branches. CBE alone mobilized 66.1 percent of the total deposits banking system owing to its large branch network.

Raising funds through borrowing by the banking system was not an important source of resource mobilization in Ethiopia as virtually all banks deposit mobilization and collection of loans. Consequently, total outstanding borrowing of the banking system stood at Birr 32.9 billion slightly higher than Birr 31.2 billion a year ago. Of the total borrowing, domestic sources accounted for 89.1 percent and foreign sources the remaining balance. Birr 77.2 billion collected during the review 56.3 percent was the share of private banks

Banks, including Development Bank of Ethiopia (DBE) disbursed fresh loans to the tune of Birr 88.0 billion in 2015/16 which was a 16.6 percent higher than a year ago. Of the total new loans, about 43.6 percent was made by private banks, and the rest by public banks. About 29.0 percent of the loans went to industry followed by domestic trade (17.1 percent), housing and construction (15.5 percent), agriculture (15.2 percent) and international trade (10.8 percent) and others (12.4 percent).

Total outstanding credit of the banking system expanded by 20.4 percent and reached Birr 280.3 outstanding claims on private sector rose by 23.8 percent, on public enterprises 21.2 percent and on the central government 6.2 percent. Outstanding credit to industry accounted for 37.8 percent followed by international trade (18.5 percent), domestic trade (10.2 percent), housing and construction (10 percent) and agriculture (7.3 percent). The share of private sector (including

cooperatives) in outstanding credit was Birr 179.2 billion (or 63.9 percent) depicting a 21.5 percent annual growth. (NBE)

1.2. Statement of the problem

A more efficient financial sector is more likely to direct a country's scarce resources to their most productive use. As this occurs, economic growth could reach its full potential. Besides, since the primary task of financial intermediaries is to channel funds to the most profitable investments they identify, then efficient financial markets improve the quality of investments which eventually enhances economic growth. Generally speaking, a well-developed financial system could improve the efficiency of financing decisions and favoring a better allocation of resources and accelerate economic growth.

Alex (2012) noted that banks play several vital roles in any economy. And these roles are aimed at ensuring sound financial system and economic stability. It is incontrovertible that the banking system is the engine of growth in any economy, given its function of financial intermediation. Through this function, banks facilitate capital formation, lubricate the production engine turbines and promote economic growth. However, banks' ability to engender economic growth and development depends on the health, soundness and stability of the banking system itself (Alex 2012). Similarly, Abdul Salam (2013) noted that financial intermediation is the process through which financial institutions transfer financial resources from surplus units of the economy to deficit ones. However, for financial institutions to discharge this role effectively, they have to be developed in terms of their resource mobilization, variety of financial assets and efficient in credit allocation

Currently, the financial sector in Ethiopia is composed of the banking industry, insurance companies, microfinance institutions, saving and credit cooperatives and the informal financial sector. But the Ethiopian financial system is rudimentary and dominated by banks. Zerayehu *et al* (2013) noted that the banking industry accounts for about 95% of the total financial sector assets. But, he also noted that Ethiopia is still remains a highly under-banked country in the world even though supply of the banking service is growing from year to year but it has not led to an increased outreach of the banking system at large (Roman, 2012). Therefore, it is possible to say that Ethiopia's commercial bank development, as measured by its development indicators

such as deposits of commercial banks, loan and advances and asset with respect to GDP needs empirically investigation in the context of Ethiopia just to know whether those indicators are contribute the growth of Ethiopian economy . the objective of this study is to empirically examine the contribution commercial banks' to economic growth in the context of Ethiopia by using the variables that are considered in this study Therefore this study will aim as to provide further evidence by examining the contribution of commercial banks on economic growth of Ethiopia for the 2001-2017 periods. And focus on formal financial development matter for economic growth of Ethiopia With the vast collection of documented literature supporting the positive contribution of finance to growth in general, the impact of financial development in terms of commercial banks development on the overall growth and major economic sectors of Ethiopia, to identify challenges associated with financial development of the country.

1.4. Research Question

In line with the broad purpose statement highlighted above, the following specific research questions were formulated as follows.

1. Does Commercial Banks in Ethiopia profitability contribute to the Ethiopian economic growth?
2. Does Commercial Banks in Ethiopia Loan and advances contribute to the Ethiopian economic growth?
3. Does Commercial Banks in Ethiopia asset contribute to Ethiopian economic growth?
4. Does Commercial Banks in Ethiopia deposit contribute to the Ethiopian economic growth?

1.5. Hypotheses of the Study

In line with the broad purpose statement the following hypotheses were also formulated for investigation purpose. Hypotheses of the study stands on the theories related to a banking sector development and economic growth that has been developed over the years by banking area researchers and past empirical studies. Hence, based on the general objective, the present study seeks to test the following 3 hypotheses:

H1: Commercial Banks in Ethiopia profitability contributes to the Ethiopian economic growth.

H2: Commercial Banks in Ethiopia Loan and advances contribute to the Ethiopian economic growth.

H3: Commercial Banks in Ethiopia asset contributes to Ethiopian economic growth.

H4: Commercial Banks in Ethiopia deposits contribute to the Ethiopian economic growth.

1.6. Research Objectives

1.6.1. General objective of the study

The general objective of this study is to analyze the contribution of Commercial Banks in Ethiopia towards the growth of the Ethiopian economy.

1.6. 2. Specific Objectives of the Study

To study the contribution of Commercial Banks in Ethiopia profitability, asset, loan and advancement, deposit, investment, on the Ethiopian economy.

1. To determine the contribution of Commercial Banks in Ethiopia's profitability towards the economy growth of Ethiopia.
2. To investigate the contribution of Commercial Banks in Ethiopia's Loan and advances towards the economy growth of Ethiopia.
3. To determine the contribution of Commercial banks Ethiopia's asset towards the growth of the Ethiopian economy.
4. To investigate the contribution of Commercial Banks Ethiopia's deposit towards the growth of the Ethiopian economy.

1.7. Scope of the Study

This research study is undertake in Ethiopia, covering a sample of commercial banks licensed, supervised and regulated by NBE as at December 2010. The study covered a time starting from July 2001to June 2017

1.8. Organization of the Study

This paper is structured as follows. The first chapter presents the introduction to the study. Chapter two reviews the theories and literature studies related to financial development and economic growth. Chapter three gives the data and methodology that has been used in the paper. Chapter four presents the findings from the estimation results and chapter five concludes and provides policy implications of the study.

Unit two

Review of related literature

2.1. Introduction

This section shall provide general literature on definition of concepts theoretical framework, discussion of major findings empirical framework, research hypotheses the conceptual framework.

2.2 Theoretical review

The influence of financial system development on growth and the role it plays through its impact on savings and investment are well documented. Financial institutions, financial instruments and financial markets arise to remove the effects of information, enforcement and transactions costs. How efficiently the financial system is able to reduce these costs has enormous and widespread Effects on savings and investment decisions, technological innovation, and ultimately on per capita GDP and productivity growth rates. Apart from financial institutions' main task of producing and disseminating information about investment projects and allocating resources, they also monitor these investments and manage and diversify these investment risks. At the same time, the financial systems such as commercial banks, mobilize savings and ease exchange (King & Levine, 1993a). Cihak, Demirguc-Kunt, Feyen, and Levine (2013) show those low-income countries' financial systems are internationally comparable in terms of stability. As for financial depth, low-income countries are about a fourth of those in high (lower-middle) income countries, while in terms of financial efficiency these ratios are half and two-thirds and regarding financial access a tenth and a quarter, respectively. Such aggregate measures show that financial depth is far from being the only important issue for low-income countries, with efficiency and access as more pressing issues. A growing body of literature including that of Rousseau and Wachtel (1998), Levine et al. (2000), and Knapman et al. (2001), demonstrates a strong positive link between financial development and economic growth, and Levine (1997) provides evidence that the level of financial development is a good predictor of future economic development. Empirical studies have established that there is a positive relationship between the financial

sector development (banking sector development) and economic growth (Levine, 2005). This was initially influenced by Schumpeter (1912) whose work identified a ‘new combination’ of concepts for entrepreneurs used in economic development. In his book, “The Theory of Economic Development”, Schumpeter (1912) emphasized that economic development in a market economy is evidenced specifically through the means of administrative power and bank loans. It raises the important emphasis on the role played by entrepreneurs who, according to Schumpeter, in many cases use stocks of capital supplied through the mechanisms of credit by capitalists and bankers. Other seminal works in this field include Gerschenkron (1962) whose work focused on determining the role of the banking sector during the industrialization process. Furthermore, Patrick (1966) and Goldsmith (1969) discussed the finance-growth relationship and identified two ways of looking at the financial development and economic growth relationship specified as “demand-following” and “supply-leading”. These set the theoretical framework on the study of financial development and economic growth. There is also evidence that the level of financial development is a good predictor of future economic growth, capital accumulation and

Technological change that can crucially affect the speed and pattern of economic development (Levine, 1993). One issue associated with the focus on low-income countries is how financial development emerges. If financial development is an important pre-condition for low-income countries, a study of the type of financial system structure conducive for growth (for example the role of commercial banks) or a study of the crucial role played by capital flows could be further investigated in these countries. Furthermore, further research into the role of foreign aid (and the donor community) in shoring up financial development in poorer countries; identifying whether foreign aid plays a role in changing the structure of domestic financial systems in poorer countries; and identifying how financial Development connects economic and political elites can provide avenues in supporting financial Development policies. For example, Nkusu and Sayek (2004) empirically highlighted that developing local financial market depth through financial sector reform enhances aid effectiveness. These studies may stimulate authorities and policymakers to carry out financial liberalization and structural reforms if necessary. While it may require a substantial data collection effort, findings from related empirical studies such as those of Campos and Kinoshita (2008) point to the direction in which financial sector reform may be a key factor in enhancing the benefits of foreign capital inflows specifically for developing countries, in particular, financial liberalization and privatization. These studies by

Nkusu and Sayek (2004) and Campos and Kinoshita (2008) illustrated how efforts for successful financial liberalization and structural reforms fostered by the domestic financial system may support aid effectiveness and foreign direct investment. Another aspect concerns the micro macro link in the institutions which may prove crucial to understanding the key constraints on financial development in low-income countries. Access to financial resources and services plays an important role in economic development; however whether ‘inadequate’ financial development has an impact on economic growth is questionable. Although studies such as those of Goldsmith (1969), King and Levine (1993b), Aghion, Howitt, and Mayer-Foulkes (2005) and Levine (2005) show a positive relationship between financial development and economic growth, economists hold different views on the existence and direction of causality that exist between financial development and economic growth. The first is the “supplieside” view, which states that financial development has a positive effect on economic growth. According to this view, financial intermediation contributes to economic growth through two main channels: (1) by raising the efficiency of capital accumulation and in turn the marginal productivity of capital (Goldsmith, 1969) and (2) by raising the savings rate and thus the investment rate (McKinnon 1973; Shaw, 1973). In other words, by increasing the size of savings and improving the efficiency of investment, financial development leads to higher economic growth. The second view of the relationship between the two variables was advanced by (Robinson, 1952) who stated that financial development follows economic growth or “where enterprise leads finance follows”. According to this “demand-following” view, as the real economy expands, its demand for financial services increases, leading to the growth in these services. Empirical support for both views can also be found in recent studies (Demetriades and Hussein 1996; Christopoulos and Tsionas 2004). Expansion of the financial system may be induced by a higher per capita income due to increased demand for financial services. This is based on Robinson’s (1952) hypothesis that more financial institutions, financial products and services will emerge in response to the greater demand for financial services when an economy expands. This implies that the level of real economic activity critically affects financial development. McKinnon (1973) and Shaw (1973) took a different view on how the financial system regulation and its framework, particularly interest rate ceilings, may distort the economy in several ways. First, it may discourage entrepreneurs from investing in high risk but potentially high-yielding investment projects. Second, financial intermediaries may become more risk averse and offer

preferential lending to established borrowers. Third, borrowers who obtain their funds at relatively low cost may prefer to invest only in capital intensive projects. McKinnon (1973) and Shaw (1973) argued in favor of liberalizing the financial sector by way of removing interest rate controls and allowing the market to determine its own credit allocation in order to deepen the financial systems. On the other hand, other arguments suggest otherwise, for instance, with deposit insurance, the absence of interest rate control may result in overly risky lending behavior among banks. Stiglitz (1994) opposes the view that interest rate restraints may lead to higher financial savings in the presence of good governance in the financial system. When depositors perceive restrictions as policies aimed at enhancing the stability of the financial system, they may be more willing to keep their savings in the form of bank deposits thereby increasing the depth of the financial system. On the other hand, the rapid changes in the financial sectors as a result of deregulation, technological innovation and new financial products have contributed to financial and economic development (Levine, 1997).

2.2.1. The Theory of Financial Intermediaries

The theory of Financial Intermediation advocates that financial intermediaries play a crucial role of intermediation in the growth process by transferring financial resources from the net savers to net borrowers, thus influencing investment and thereby economic growth. The theory suggests that financial intermediaries can overcome a market failure and resolve an information asymmetry problem by transforming the risk characteristics of assets. These asymmetries in credit markets arise because borrowers generally know more about their investment projects than lenders do. Information failures lead to specific forms of transaction costs and financial intermediaries appear to overcome these costs, at least partially. The notion of transaction costs encompasses not only exchange or monetary transaction costs (Tobin, 1963) but also searches, monitoring and auditing costs (Benston and Smith, 1976).

The work of Schumpeter (1911) supports the view that well-functioning financial intermediaries can promote the overall economic efficiency. By pooling and allocating funds, financial intermediation promotes entrepreneurship and innovation which are necessary components for economic development.

2.3. Empirical review

2.3.1 Financial development and economic growth relationship

Levine (1997) highlighted in his work that the level of financial development is a good predictor of future rates of economic growth, capital accumulation and technological change. Financial instruments, markets and institutions arise to mitigate the effects of information and transaction costs. Finding ways to reduce transaction costs influences saving rates, investment decisions, technological innovations and the long-run growth rate of the economy. In the same way, innovations in telecommunications (such as internet banking) and technological changes (the use of POS and Automatic Teller Machines) have affected the financial services industries and the way commercial banks deliver services to their clients (Claessens, Glaessner, & Klingebiel, 2000). The works of Schumpeter (1912) point out that a well-functioning financial system encourages technological innovations by increasing funding to entrepreneurs who ultimately leads to economic growth that establishes the link between the functioning of the financial systems and economic growth. These findings also include firms and industries that rely heavily on external financing and grow disproportionately faster in countries with well-developed banks and securities than in countries with poorly developed financial systems. In addition to many other important aspects, the performance and long-term economic growth and welfare of a country are related to its degree of financial development. Financial development is measured by factors such as the size, depth, access, efficiency and stability of a financial system. This includes markets, intermediaries, range of assets, institutions and regulations (World-Economic-Forum, 2012). Financial intermediation and financial markets contribute directly to economic growth and aggregate economic welfare through their effects on capital accumulation (the rate of investment) and technological innovations. First, greater financial development leads to greater mobilization of savings and its allocation to the highest-return investment projects. This increased accumulation increases economic growth. Second, by allocating capital to the right investment projects and promoting sound corporate governance, financial development increases the rate of technological innovation and productivity growth, further enhancing economic growth and welfare (World-Economic-Forum, 2012). The financial sector can be developed in many different ways, such as with improvements in the efficiency and competitiveness of the sector (ADB, 2015). The range of financial services that are available may increase the diversity of the

institutions which operate in the financial sector; the amount of money that is intermediated through the financial sector may also increase, along with the extent to which capital is allocated by private sector financial institutions to private sector enterprises. The regulation and stability of the financial sector may improve, and more importantly the improvement in access to financial services is considered important from a poverty reduction perspective (World-Bank , 2011); ADB 2015). Modern growth theory identifies two specific channels through which the financial sector might affect long-run growth: (1) through its impact on capital accumulation (including human as well as physical capital) and (2) through its impact on the rate of technological progress (Levine, 1997) Theil (2001) noted a very simple growth model that illustrates the three important connections between financial variables and economic activity via the so-called AK model ($Y_t = A K_t^\alpha$; where Y_t is output in period t produced by capital, and A symbolizes capital productivity). This model assumes that an efficient financial system reduces the loss of resources required to allocate capital and can be used to derive the optimal size of the financial system (Theil, 2001). The more efficient the transformation of savings into investment, the lower the loss of resources and the more the savings can be used for productive investments. This positive feedback effect between finance and growth is demonstrated in Harrison et al, (1999). The positive feedback effects through the credit and investment channels on the finance-economic growth relationship is evidently productive in mobilizing savings for investment, facilitating and encouraging inflows of foreign capital (including FDI, portfolio investment and bonds, and remittances), optimizing the allocation of capital between competing uses, and ensuring that capital goes to the most productive use (FitzGerald, 2006). In this regard, Levine (1997) identified five basic functions of financial intermediaries which give rise to these positive feedbacks effects in this channel: (1) saving mobilization, (2) risk management, (3) acquiring information about investment opportunities, (4) monitoring borrowers and exerting corporate control, and (5) facilitating the exchange of goods and services Mobilization of savings could be an important function of the financial sector in developing island countries with developing financial systems. (LEVIN) The provision of saving facilities or transaction bank accounts enables households to store their money in a secure place, and allows money to be put to productive use. Bringing savings into the financial sector where they can be utilized productively could itself make a significant contribution to growth in the country, in particular, the productivity growth and capital accumulation channels. The returns on investment can create

positive expected returns for the savers, which may in turn increase savings. At the same time, credit may also be made available to finance investment in education or health, and can thus promote the accumulation of human capital (De-Gregorio, 1996). Financial institutions may also increase the rate of technological progress by identifying and thus allocating capital towards those innovations with the best chances of succeeding (King & Levine, 1993b). Researchers have also identified limitations in the methods of investigating the relationship between financial development and economic growth. The problem associated with the types of cross-country studies is that they generate estimates of the average effects of financial development, while the relationship may vary considerably among countries. On the other hand, the political, economic and institutional diversity that build up the financial system differs for different countries (Al-Yousif, 2002). As a result, a number of authors have extended their studies to examine the finance-growth relationship using time-series data on individual countries, and thus have found that the nature of the relationship can indeed vary among countries. Therefore, caution should be used in making generalizations about the likely benefits arising from Financial Sector Development (FSD) in any particular country compared to developed countries. The weight of the evidence shows that FSD does make an important contribution to growth in most countries in the developing world (Esso (2010); Hassan, Sanchez, and Yu (2011); Pan and Wang (2013).

2.3.2 Access to financial resources and services as part of financial development

Apart from their vast cultural diversity, a main feature of the developing countries, typical of Ethiopia underdeveloped financial systems, is the existence of unorganized money markets that reflects the importance of traditional cultural practices and communal ownership of assets. The unorganized money markets do not help in the accumulation of capital funds; neither can their financial assets be used and invested in those areas where the need for development is the greatest. They tend to remain isolated from other money markets, centering on indigenous banks or money lenders and possess strong regional characteristics. This type of weak financial intermediation is dominant in the rural and a few urban areas and can result in insecurity of debt contracts the commercial sector becomes an important sector in lending because there is sufficient credit and security, and the capital is invested for a short term (usually less than one year). The biggest task for financial development in underdeveloped countries is the

accumulation of domestic capital and its investment as capital for the industry. In order to establish an organized money market, such measures can only be established through the establishment of new banks, increases in branch offices, making banking facilities available throughout the nation, or raising interest rates to support savings. Increased capital formation cannot be achieved by mere financial and fiscal techniques alone, but also movement of people's savings (Aryeetey & Gockel, 19)

2.3.3 Financial development indicators

The common indicators used in empirical studies to investigate the finance-economic growth relationship include the total credit to the economy termed as an appropriate measure of financial development (Levine et al, 2000); Abubakar and Gani 2013). This monetary aggregate is a traditional proxy of financial development and deepening (Lynch, 1996). It supports the mobilization of savings to facilitate transactions, provide credit to producers and consumers, reduce transaction costs and fulfill the medium exchange function of money. The ratio of liquid liabilities to GDP (indicated as M3/GDP) was used as a measure of financial depth; however Levine and Zervos (1998) argued that the use of this indicator limits the identification of where the financial system allocates capital. Despite its widely used measure, Levine and Zervos also argued that increases in M3/GDP as

A measure of the liabilities of banks, the central bank and financial intermediaries are not necessarily associated with increases in credit (one aspect of financial development that might generate economic growth). Therefore, our study will include other proxy measurements that can be used to identify the development of the formal financial sector in , such as the ratio of total financial assets of the commercial banking system to GDP as a proxy indicator for financial system development, the ratio of private sector credit to GDP as a proxy indicator in measuring the development of financial intermediaries, and commercial banks' average interest rate spread as a proxy indicator for efficiency or accessibility of financial intermediaries. Lynch (1996) also identified that various other monetary aggregates, namely broad/money and bank deposits as quantity measures, are more reliable across time in a country than across countries. Most importantly, Lynch indicated that financial intermediation transaction costs cannot be evaluated accurately in individual countries and cannot be compared across countries, owing to differences in variables ranging from financial sector design to population dispersion. Alternatively, bank

interest rate margins are another indicator often used to estimate the intermediation transaction costs (Lynch, 1996).

2.3.4. Banking Sector and Economic Development

Samson and Abass (2013) asserted that the development of banking and growth of modern economies seems inseparable. Until the late seventh century, there had existed no modern banking institution anywhere in the world, and there had no modern developed economy. There are many factors which determine the level and interest rate of development of an economy. These include the natural resources endowment, supply of skilled labor and, of course, capital. Capital is critical factor required in the process of economic development. This includes real capital such as machineries and equipment and financial capital. The quantum of financial capital required before there could be any meaningful economic development also underscores the importance of banks. An individual's savings are not usually large enough to procure all his needed resources for development. The saver may not also possess the ability and the initiative that investment calls for. The banks therefore, aggregate the small savings of the individuals and hold these, away from the consumption, ready for investment. Consequently; investment in large physical projects is possible because qualified investors have access to the substantial stock of funds in temporary residence with the banks. This inter-mediation function of the banks facilitates development as it encourages savings and investments both of which are economically very rewarding. Banks also influence the quantum of purchasing power available for the investment and consumption expenditures. The banks do this through their power to expand or contract credit. By their policies, banks also affect (e.g. prices of the various financial claims) the direction of funds to alternative uses. The banks determine whether credit will be available for financing investment in agriculture, industry or consumption. How banks perform this role affects the pace and pattern of development in different sectors of the economy. Banks are very different from other financial intermediaries because of the "high degree of liquidity" of their demand deposits as well as their ability to "create" and "destroy" money. In a modern economy, the greater proportion of the money supply is deposit money created by commercial banks. Banks, as a group, therefore constitute the principal supplier of the medium of exchange (Samson and Abass, 2014).

2.3.5. Indicators of Commercial Banking Sector Development

To assess the development of the commercial banking sector their development indicators has been employed to find the relationship between commercial banks and economic growth. These indicators are discussed hereunder.

- **Deposit**

As Depti and Mamta (2014) noted the saving rate of any country is an important indicator of economic development since the domestic saving rate is directly related with the investment rate and the lending capacity of the banking system. Banks use the deposited money by the public and other depositors (Companies, other banks, Government, other financial institution etc.) for credit creation in the economy which results in increasing GDP. Banks further use the deposited money by the public and other depositors (Companies, other banks, Government, other financial institution etc.) for credit creation in the economy which results in increasing GDP. Saving and investment are two key macro variables with micro foundations, which play a significant role in economic growth (Depti and Mamta, 2014). Giving further support to this line of argument, the endogenous growth theory argues that a higher savings rate leads to higher economic growth. Moreover, mobilization of savings is one of the major functions of financial institutions. By mobilizing the savings of millions of savers in an economy and the channeling of same to the deficit spending units, the funds or capital needed for economic growth and development is enhanced (Samson and Abass, 2013). Crockett (1970) noted that the activities of commercial banks as engine of growth of the economy could better be seen through the performance of their main function which include taking of deposits from the general public, providing account keeping and money transmission services. Indeed, in an efficiently functioning financial system, the size of a bank's business, or that of any other financial intermediary, depends on its ability to attract funds in competition with other institutions. This ability will depend on the attractiveness to depositors of the package of services it offers. This package will consist of the interest rate paid, security offered, convenience in account management facilities, financial advice etc. (Crockett, 1970).

- **Loan and Advances**

As Facilia (2011) noted commercial banks are the most important savings, mobilization and financial resource allocation institutions. Consequently, these roles make them an important phenomenon in economic growth and development. Lending practices in the world could be traced to the period of industrial revolution which increase the pace of commercial and production activities thereby bringing about the need for large capital outlays for projects. Many captains of industry at this period were unable to meet up with the sudden upturn in the financial requirements and therefore turn to the banks for assistance. Therefore, lending which may be on short, medium or long-term basis is one of the services that commercial banks do render to their customers. In other words, banks do grant loans and advances to individuals, business organizations as well as government in order to enable them embark on investment and development activities as a mean of aiding their growth in particular or contributing toward the economic development of a country in general (Facilia, 2011). With similar line of argument, Ibru (2008) highlighted the contributions of banks to the economy. She said that the intervention of banks in the provision of funds for different stages of business pursuits is a boost for the economy. According to Bhosale (2014) just as capital is one important factor that must grow if the economy is to develop, enterprise is another important factor that must grow and help the economy to develop. This requires the expansion of the entrepreneurial class which is willing to accept risks and challenges. Many times, it so happens that there is people who have the qualities of a promising entrepreneur, but they do not have the money or capital to put their plans into practice. Hence, banks have an important function to perform. They can scrutinize and select the plans of enthusiastic entrepreneurs and make finance available to them. Thus, by promoting enterprise, banks can help rapid economic development. Banking industry is among the most important financial institutions in the economy of any nation. According to Rose (1999), they are the principal source of credit (loanable funds) for millions of households (individuals and families) and for most local unit of government (school districts, cities, countries, etc). She further maintained that for small local businesses ranging from grocery stores to automobile dealers, banks are often the major source of credit to stock them with merchandise or to fill a dealer's show room with new cars. Samson and Abass (2013) noted that Principal amongst the functions performed by the commercial banks are to ensure the adequacy of the stock of money

to service the needs of the economy and facilitate the transfer of money between economic units. This transfer is usually from areas of surplus to areas of deficits/needs.

- **Size of Banking Sector (Assets)**

There is common agreement that the ultimate purpose of the financial sector should be to serve the real economy. A country's financial sector is important for real economic activity as the size of an efficient financial sector not only affects the level of output by allocating productive capital more efficiently but may also contribute to economic growth (Levine, 2005; King & Levine, 1993). Since the size of the bank is related to the size of firms and households that need finance. In contrast, Arcand et al (2012) state that more finance is not always better and there might be (negative) side effects when the financial sector becomes too large. These authors indicate that there may be a threshold above which financial development no longer has a positive effect on economic growth and may harm the economy and society as a whole (Arcand et al., 2012). For example, when the financial sector grows too large, it might lead to a misallocation of resources and cause costly crises (Arcand et al., 2012).

- **Economic growth**

The model of economic growth is regarded as an increase in the net national production in a given period of time (Dewett, 2005). This study elucidated that economic growth is in general referred to as a quantitative alteration in economic variables, normally persevering over successive periods. Todaro and Smith (2006) distinct economic growth as a sound process by which the productive volume of the economy is augmented over time to bring about rising levels of national production and income. Jhingan (2006) considers economic growth as rise in output and clarifies further that it is associated to a quantitative sustained rise in the country's per capita income or production escorted by increase in its labor force, consumption, capital and size of trade. The key features of economic growth are great rate of growth of per capita income or, high rate of yield, high rate of structural transformation, international flows of resources such as labor, goods and capital (Ochejele, 2007). Economic growth can also be expressed in terms of gross domestic product (GDP) and Index of Human Development (HDI), which is an index that gauges national growth based on measures of life expectation at birth, education accomplishment, literacy and adjusted real per capita income. Following the above definition we can draw that

economic growth is when there is a sustained increase in the real production of goods and services per head. The gross domestic product is one of the most significant economic signs used by economic decision makers and government in preparation and formulation of policies. Gross domestic product (GDP) is the most imperative economic indicator that reflects the overall health of the economy. If by growth you intend the increase of output of goods and services, then real GDP which measures growth without the effects of inflation is hardly acceptable (Lequiller, 2001). It has been put up for this purpose. Gross Domestic Product is clear as the totality of all goods and services created in a country over time, without double counting yields used in other output. It is a broad measure, covering the production of consumer goods and services, even government facilities.

GDP effects on economy

We live today in a world, where economy and money are very much in control. As a consequence, people have slowly but steadily turned from citizens to consumers. Thus, the overall view of human beings has turned to an economic one which is very simplifying. “The hegemony of economy has also changed greatly the fundamentals of our civilization and societal behavior. The dominant rationales of economics have promoted characteristics like greed, profit seeking, immorality and even aggression and violence” (Hoffrén, 2011). This provokes a negative, yet rational “take the money and run” mentality among business actors. To understand the big picture of where we are now, it is necessary to look at how economics has developed.

Gross domestic product is standardized as an economic indicator by United Nations System of National Accounts, measuring the total output of goods and services of a state during a certain period of time. It is used for comparing the economic performance of states, but very often the comparison is broadened to evaluate and make estimates of living standards, progress or social welfare between states, although GDP was not originally developed for this purpose.

In essence, economic growth depends on the accumulation of input factors in the production process and technical progress. Traditionally, finance has been linked primarily with the first of these sources of growth, regarding capital as an important input factor and its accumulation as a condition for sustainable economic growth. Furthermore, finance contributes to the realisation of

technical progress to the extent that technical advances need to be embedded in the capital stock to influence production. In particular, in periods of rapid technical progress, an efficiently structured financial sector appears to be required in order to facilitate embedding technical advances in capital formation and allowing countries to benefit from this development in terms of higher rates of economic growth.

Growth theory assumes that the interest rate plays the main role in equilibrating an economy's savings and investment. According to the neo-classical Golden Rule, the optimal growth path is equal to the real interest rate. For a long time, the design of the financial sector was thought to be of no major importance for economic decision making because in the presence of perfect markets, the financial sector produces nothing but a veil on the true determinants of economic developments. While today's understanding of market imperfections has allowed this view to be put aside, the exact transmission channels from finance to economic activity and in particular any estimate of their quantitative impact are still subject to considerable uncertainty. GDP is not an adequate measure of standard of living or sustainable economics but it has to be kept in mind that it was never originally developed for this purpose. Instead its use has evolved to a point where its appropriateness can, and even should, be questioned. One reason why GDP is still used in measuring standard of living despite all of its shortcomings is that it has been very strongly integrated in our society. A major factor in the solid integration of the GDP has been the link between increased production and increased well-being, which was especially true in the Western world after the World War II. However now we have passed the phase where increased production equals increased welfare. As the share of people working with services is growing and the number of people working with production steadily declining, a change should also take place in the way we measure the economy. Still during the time when the GDP was developed politics were guiding the economy and business, but nowadays the situation is very much the other way around. The politicians are talking about a welfare-state, but the reality is more of a competition-state, which is global competition of the highest possible GDP. If policy-makers would want to truly increase welfare in the long run, the GDP would be replaced or at least

Supplemented with another economic indicator.

It is hardly likely that GDP would be replaced with one single index in the near future, as there is still a lot of debate on how to value the different costs. More probable development will be that

indicator dashboards will be more widely taken in to use. Further research on economic measurement could focus more on the behavioral effects of GDP information and if GDP is not replaced with a new indicator, how the negative effects of the information could be minimized. Although GDP might seem a distant and abstract economic indicator, it is surprising how much it affects the decision making of policy makers and even individual consumers and by so, the whole economy. In the media, GDP growth forecasts are very often among the headline news. As we currently live in an information society and more in-formation is available to us than ever, GDP information has a more important role than ever. The growth figures receive a lot of attention from the policy makers as GDP growth is very often one of the main economic goals of a state. Low growth figures might be seen by the public as bad performance by the politicians, so politicians might do their best to keep the growth rates high, even though this might not be done in a sustainable way (Van den Bergh 2008: 120-121). Partly due to the importance of GDP, economists have a very important role in the society. (Cobb, Halstead & Rowe 1995: 11) .GDP information also affects individual decision making, the buying behavior of consumers and consumer confidence. Van den Bergh (2009: 120) writes how the recent financial crisis is a good example of the herd behavior, which the GDP information leads to. The constant information of the low growth figures reinforce the feelings of the consumers and investors and by so creates a vicious cycle. Van den Bergh (2009: 121) points out that there is a lack of empirical studies in the true behavioral effects of the GDP information on the economy.

- **GDP and profitability**

Profitability and performance of banks is a key for economic growth; the strength of most industries relies on the availability of finance provided within the economy by the banks to facilitate transaction. It is on this premise that this research is carried on to determine how profitability in the banking industry plays role in economic growth in Jordan. Profitability is calculated by return on total assets. It stands for the ratio which measures earnings before interest and tax expenses against its total assets. This ratio shows the firm's effectiveness of using its assets to generate earnings. Investor follows this ratio to make decision whether or not to invest in the company. This ratio shows how profitable a company is relative to its total assets. The return on assets (ROA) ratio explains how management is using the company's total assets

making a profit. The higher the return, the better organized management is in utilizing its asset base (Francis, LaFond, Olsson, & Schipper, 2005).

Profit

In all economies, banks play a key role in transforming savings into investment. This holds especially true of a primarily bank-based financial system. Therefore, developments in the banking sector do not affect banks alone, but are highly relevant for the economy as a whole. Accordingly, the efficiency and profitability of the banking sector is of interest not just at the business level, i.e. at the individual bank level; rather, it is crucial at a broader macroeconomic level. Profits are a basic factor in the capital formation of enterprises, which include banks. Capital can be increased either by issuing equity or by retaining earnings (adjusted for payouts – dividend payments, share buybacks, etc. – to shareholders). Profits have an impact on a bank's cost of raising capital not only because of their direct contribution to equity financing, but also because profitability has an effect on external investors' assessment of the bank's financial strength. The better a bank's profit situation is, the better its prospects are for issuing new capital, because investors have greater confidence in the bank's financial strength. This applies to the cost of both equity and debt financing. The theory of the bank capital channel, which explores the link between equity ratios and the loan supply (Van den Heuvel, 2002, 2009) postulates that profits impact on bank lending through their effects on bank capital. International studies have shown that banks with sufficient capital resources are better equipped to absorb monetary policy and macroeconomic shocks (Altunbas et al., 2004; Gambacorta and Mistrulli, 2004). Conversely, banks with shrinking capital resources could be induced to cut back on lending on the asset side. The survey data show that, to some extent, banks' balance sheet constraints contributed to the tightening of lending standards in the course of the crisis. At the same time, well-capitalized banks are in a better position to attract deposits, and thus have more funds to lend.

John Maynard Keynes, who has been considered as one of the founders of modern macroeconomics, had an important role in developing the GDP as well. During the World Wars Keynes made notable research which helped to develop the GDP we use today. Generally so-called Keynesian economics is considered to support an active role from the government in the economics and believe that monetary and fiscal policy should be used to manage the macro

economy (Case & Fair, 2006: 685). So a tool which would help the government to guide the whole economy would fit well to the Keynesian ideology (Cobb, Halstead & Rowe, 1995: 5).

Cyclical aspects must also be taken into account in macroeconomic analyses of bank profits. A number of studies have shown that the position in the economic cycle may influence bank profits significantly (Albertazzi and Gambacorta, 2009). Economic growth is the most comprehensive measure of macroeconomic developments, and is thus an indicator of both demand for bank services and credit risk (loan loss provisions). Therefore, real GDP growth is used as an explanatory variable, and it is expected that economic growth and bank profit are positively correlated. In addition, the general level of interest rates – above all, the spread between short-term and long-term interest rates – is key to explaining bank profitability. As the maturities of banks' assets and liabilities frequently differ – usually, their investment has a longer maturity than their funding – changes in the yield curve have a noticeable impact on the profitability of maturity transformation. A positive correlation between the spreads and bank profitability is expected. Like other studies on this topic, this study also uses the inflation rate as an additional economic variable in the analysis. Arpa et al. (2001), Bikker and Hu (2002), and Demirgüç-Kunt and Huizinga (2000) all find a positive correlation between bank profit and inflation. However, the literature hardly substantiates this correlation. It is conceivable, for example, that fees and commissions rise simply because the nominal value of the underlying assets rises, or that interest rates on loans are adjusted for inflation more quickly than those on deposits, which may temporarily lead to higher profits in periods of higher inflation.

- **GDP and deposits**

Deposits are the money which people offer to banks and obtain interest as profit. Without having deposits banks are by able to invest and lend anywhere. There are different types of deposits like call deposits, saving deposits, current deposits, and fixed deposits.

Deposit

Overall, the literatures provides broad empirical evidence of a positive relation between finance and economic growth, with the papers mainly differing in the data coverage as regards countries and time periods, the estimation methods and the variables selected.

The first evidence that financial development accelerates growth was presented by Goldsmith in a study covering 35 countries over the period 1860-1963. However, his work did neither control for other factors, nor did it allow the derivation of any conclusions as regards causality or the relative importance of the different transmission channels. Recent years have given rise to a vivid interest in empirical research on the finance growth nexus. In particular, the paper by King and Levine (1993) provided the

Starting point for intensified research, which received a major impetus by the construction of the financial structure database compiled for the World Bank by Beck et al. (1999).¹⁹ King/Levine (1993) found a strong statistical relation for twelve combinations of four financial variables with three growth indicators after controlling for a set of further variables.

Financial variables in 1960 were correlated with the three growth variables in the period 1960-1989, which was interpreted as evidence for a causal link from finance to growth. Rousseau/Wachtel (1998) examined the causal link between bank assets and bank deposits and real economic growth for five industrial countries in the period 1870-1929. They yielded evidence that financial developments lead economic growth and that movements in financial variables affect The link between inefficient control and the accumulation of too much capital is emphasised by Chirinko (2001). It is, however, questionable, whether this effect is robust at the aggregate level. If owners would reduce savings in response to inefficient investment by managers, less funds were available for investment outside the incumbent firms. This argument bases on declining returns of the evaluation activity, which implies an optimal degree of evaluation and monitoring beyond which an expansion of activity is inefficient. The World Bank financial structures database is described in Beck et al. (1999). It is used for the financial variables in the graphs. Analytical papers using the database are Levine/Loayza/Beck (2000), Beck/Levine/Loayza (2000), Beck/Levine (2000), Demirguc-Kunt/Levine (1999), Beck et al (2000a, 2000b).real variables but not vice versa.²⁰ Levine and Zervos (1998) analysed the relation between six financial variables and three real growth variables (real per capita GDP growth, real per capita capital stock growth, and productivity growth) and the savings ratio. The cross-country study covering the period 1976-1993 reveals no evidence of a significant relation between the private saving rate and the financial indicators. The same conclusions are reached by two studies with the World Bank data set (Levine/Loayza/Beck (2000) and Beck/Levine/Loayza

(2000)), finding a significant impact of financial intermediation indicators on real GDP growth and productivity but an ambiguous effect on physical capital growth and saving.

Conversely, other studies such as (Bolbol & Fatheldin, 2005; Chang et al., 2010; Driscoll, 2004) found a negative association between banking and economic growth. Driscoll (2004) used the loan-deposit ratio (LDR) at the regional level as a proxy for fund reallocation in China during the period from 1991 to 2002. His study found that, in general, there is no correlation between bank fund reallocation and economic growth at the provincial branch level in China during the period of study. Nevertheless, Driscoll stresses, as China undertakes market-oriented reforms of the banking sector, positive effects of fund reallocation, and bank loans on local economic growth start to emerge.

Bolbol and Fatheldin (2005) investigated the relationship between Egypt's financial system and the total factor productivity (TFP) over the period (1974-2002). This study is the first published paper in the MENA region that analyses the simultaneous effect of the development of stock markets and banking sector on economic growth. They found that bank-based indicators have a negative effect on TFP unless they are associated with a threshold level of per capita income; whereas, the effect of market-based indicators is positively reinforced by private net resource flows. Chang et al. (2010)

Considered the effect of bank fund reallocation on growth based on 1991-2005 provincial-level data of four state-owned commercial banks of China that practice fund reallocation nationwide. Focusing on their empirical results, they found no association between bank fund reallocation and regional economic growth or between bank loans and regional economic growth but they found a positive correlation between bank deposits and growth. Moreover, as China's market-oriented reforms deepen, fund reallocation, and loans start to show a positive impact on growth even though banks are Government-owned.

- **GDP and credit facilities**

A loan or collection of loans taken on by a corporation. These loans can be various different types, reliant upon the necessities of the company, and can diverge from letters of credit to term

loans, and can be committed or uncommitted. After receiving deposits banks give loan to needy people and obtain interest.

Calculating GDP

Gross Domestic Product (GDP), represents the total market value of all final goods and services produced within a given time period by factors of production located within a country. GDP does not include intermediate goods, but only “new” products and services; this is to avoid double counting (Landerfeld, Seskin & Fraumeni 2008: 195).

GDP can be calculated in three different ways, firstly by value added (or production) approach, which adds up the gross output of different industries and then subtracts intermediate inputs, to avoid double counting. Secondly it can be calculated by income (by type) approach, which measures the income earned by different factors of production. Lastly the GDP can be determined by final demand (or expenditures) approach, which measures the activities, such as investment and consumption across different industries and imports deducted from exports. (Landerfeld, Seskin & Fraumeni 2008: 196) All of the different ways of calculating the GDP should lead to the same result.

2.4. Conceptual frame work

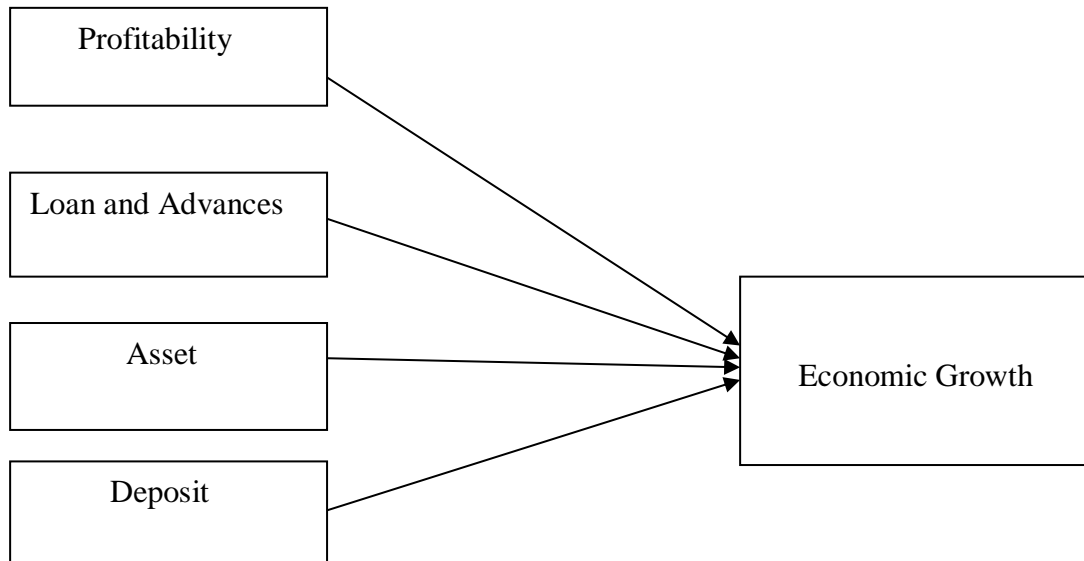


Figure 1. Conceptual Framework

Unit three

Research methodology and design

3.1. Introduction

Time series is broadly defined as any series of measurements taken at different times. It can be divided into two major parts univariate and multivariate time series. Univariate time series analysis uses only the past history of the time series being forecast plus current and past random error terms. Autoregressive integrated moving average (ARIMA) modeling is a specific subset of univariate modeling, in which a time series is expressed in terms of past values of itself (the autoregressive component) plus current and lagged values of a 'white noise' error term (the moving average component). On the other hand, multivariate time series analysis involves more than one time series data sets. Multivariate time series analysis is used when one wants to model and explain the interactions and co movements among a group of time series variables. This paper is concerned with modeling multivariate time series data. In this study the researcher use five variable namely real growth domestic product, deposit, loan and advance, asset, profit, Commercial Bank Of Ethiopia

Time series analysis is used in the study to investigate the contribution of financial development on economic growth. It covers and examines the four research questions. The two stage Ordinary Least Square (OLS) regression model is estimated with time series data for the period 2001 - 2017 to identify the contribution of financial development.. In doing so, we aim to identify the relationship and the supporting role of financial development on the country's economic growth. Therefore, we hypothesize that a positive relationship exists between financial sector development through commercial banking development and economic growth, and test the causality relationship from financial development to economic growth

3.1.6. Data collection instrument

3.1.6.1. Source of data

For this study, secondary source of data will be employed time series data for the total number 17 Years of commercial banks covering from 2001 to 2017 (i.e. for about 17 years).

3.1.6.2. Population of the Study

Population in statistics is the specific population about which information is desired. According to Ngechu (2004), a population is a well defined or set of people, services, elements, events, group of things or households that are being investigated. Therefore, the population of this study consists of all commercial banks which are operating in the Ethiopian banking industry. There are 18 commercial banks in Ethiopia. Of which 1 is public owned banks and 17 are private owned banks. Of the 18 commercial banks,

3.1.6.3. Data Collection Instruments

In order to analyze the effect of commercial banks on economic growth in Ethiopia audited financial statements of eight banks for 17 consecutive years .i.e., from 2001-2017 has been collected. The secondary data were collected through structured document review from the records held by NBE, MO FED and the banks themselves. Moreover, other macro economic data had been taken from NBE and MO FED through structured document review. Consistent and reliable research indicates that research conducted by using appropriate data collection instruments increase the credibility and value of the research findings (Koul, 2006)

3.1.2. Unit root test and stationary test

According to Owe et al (2012) a time series is considered to be stationary if it's mean and variable are independent of time. If the time series is non-stationary, that is, having a mean and or variance changing over time, it is said to have a unit root. If a time series is non-stationary, the regression analysis carried out in a conventional way will produce spurious results. A spurious regression occurs when after regression is made the time series variable on others, the test statistics show a positive relationship between these variables even though no such relationship exists. A non-stationary time series can be converted into a stationary time series by differencing.

If a time series becomes stationary after differencing one time, then the time series is said to be integrated of order one and denoted by $I(1)$. Similarly, if a time series has to be differenced a time

To make it stationary, then it is called integrated of order d and written as $I(d)$. As the stationary time series needs not to be differenced, it is denoted $I(0)$. The study will test for the order of integration using the augmented dickey-fuller test (ADF) (Okwo et al ,2012)

3.1.3 Co integration procedure

Co integration is a statistical property of time series variables. Two or more time series are co integrated if they share a common stochastic drift. If two or more series are individually integrated (in the time series sense) but some linear combination of them has a lower order of integration, then the series are said to be co integrated. A common example is where the individual series are first order integrated ($I(1)$) but some (co integrating) vector of coefficients exists to form a stationary linear combination of them. For instance, a stock market index and the price of its associated futures contract move through time, each roughly following a random walk. Testing the hypothesis that there is a statistically significant connection between the futures price and the spot price could now be done by testing for the existence of a co integrated combination of the two series. (If such a combination has a low order of integration—in particular if it is $I(0)$, this can signify an equilibrium relationship between the original series, which are said to be co integrated.) The possible presence of co integration must be taken into account when choosing a technique to test hypotheses concerning the relationship between two variables having unit roots (i.e. integrated of at least order one). The usual procedure for testing hypotheses concerning the relationship between non-stationary variables was to run ordinary least squares (OLS) regressions on data which had initially been differenced. This method is incorrect if the non stationary variables are co integrated. Co integration measures may be calculated over sets of time series using fast routines.

3.1.5. Granger test

Granger (1969) defines causality between two variables y and x as follows: y causes x if the predictability of x increases when y is taken into consideration. This study, therefore, is conducted Granger Causality to find out if the variables can be predicted from others, more specifically to know whether asset, deposits, and loans and advances of the commercial banks in

Ethiopia are used to predict the GDP and vice-versa. In conclusion, documentary analysis (documents held by commercial banks, NBE and MO FED), are separately held to gather data for the quest of the research objective. The results from these methods of inquiry will be separately presented and jointly analyzed to address the stated research questions and to empirically test the hypothesis. The analysis is based on the results obtained and literature guide.

3.1.7. Definition of Variables

This study will use four variables to determine different aspects of contribution of commercial banks to economic growth, since all measures capture different information on the role of the financial intermediaries on economic growth.

Credit allocation: (Loan granted to private sector as a share of GDP) the ratio credit to the Private Sector (CPS) relative to nominal GDP indicates the level of financial services and is employed to measure all private resources used to finance the private sector. It is the most important measure of financial intermediary development, (Levine and Zervos (1998) and Yartey (2007)) as it captures the channeling of funds from savers to investors in the private sector (Ang, 2007). This indicator excludes credit to government, government agencies and public enterprises as well as credit issued by the Central Bank (Levine, et al 2000).

Deposits: deposits are the sum of demand deposit, savings and time deposits; it provides an alternative to the broad money ratio especially when dealing with developing countries. The ratio measures the degree of monetization in the economy as well as the depth of the financial sector while it also shows an expansion of payment and saving functions

- **Profitability of bank the proxy for return on asset(ROA)**

Size: (Total Financial Asset of banking Sectors a share of GDP) commercial banks in the measurement of financial sector indicators and assessed the extent to which commercial banks channel savings into investment, monitor firms, influence corporate governance and undertake risk management, relative to the central bank (Huang 2005)

Unit four

Data testing, analysis and discussion of results

4.1.1 Descriptive Statistics

Table 4.1 Descriptive Analysis

	LOG(RGDP)	LOG(ASSET)	LOG(DEPO)	LOG(LOAN)	RAO
Mean	26.06000	25.52027	25.23757	24.42684	0.855227
Median	25.57937	25.31684	25.04406	24.27141	0.866430
Maximum	28.08661	27.32331	27.04435	26.14384	0.876759
Minimum	24.87183	23.97620	23.74156	23.00515	0.787707
Std. Dev.	1.081165	1.121238	1.148606	1.105787	0.023705
Skewness	0.412375	0.259674	0.258935	0.198389	-1.558164
Kurtosis	1.624220	1.714771	1.697427	1.602159	4.830561
Jarque-Bera	1.822530	1.361086	1.391794	1.495569	9.252575
Probability	0.402015	0.506342	0.498627	0.473414	0.009791
Sum	443.0201	433.8446	429.0387	415.2562	14.53886
Sum Sq. Dev.	18.70270	20.11481	21.10872	19.56425	0.008991
Observations	17	17	17	17	17

The table 4.1 demonstrate summary of descriptive statistics for the variable value used in the sample. The summary of the descriptive statistics include the mean, standard deviation minimum and maximum of one dependent variable RGDP and for independent variables (deposit ,profit, loan and advance and asset) .It contains seventeen years data commercial banks in Ethiopia from 2001-2017. The descriptive statistics summarize are the collection of measurement of two things location and variation which tell one of the central value of variable (the mean is the most common measurement of this variability) and the spread of the data from the center value (i.e. variable and standard deviation). These means the sum of the observation divided by the total number of observation the median is the middle value of the total observation. The standard deviation is the square root of the variable and indicates how close the data is the mean the variable .Measures the dispersion of the data from the mean .It is the sample mean of the squared distance from the mean. Range is also another measure of dispersion.it is the difference between the largest and smallest values(maximum and minimum). Minimum is the lowest values in the variable and maximum are the largest value in the variable.

As it is mentioned above, the study used RGDP as a measure of economic growth in Ethiopia and also has considered three major independent variable as indicators of development of commercial bank are taken just to know the contribution of commercial bank in Ethiopia economy growth.

As vividly depicted in the description statistics result the RGDP has a mean of 26 its minimum and maximum 24 and 28 respectively .with regard to the independent variable the mean of the loan and advance has 24 further the average of loan and advance to RGDP fall between 26 to 24.regarding deposit the mean found at 25 meaning the average of lad to RGDP has minimum 23 maximum of 27.the other major component asset has a mean of 25 the asset to RGDP ratio of commercial bank the minimum average of 23 and maximum of 27.Finally, profit of commercial bank has mean of 0.85profit to RGDP has minimum average of 0.85and maximum of 0,87variable.max is the largest value in the variable.

4.1. 2 UNIT ROOT TEST

Table 4.2 unit root test

VARIABLE	2 nd DIFFERENCE ADF	ADF	ADF
	T stat value	5% critical value	Prob. value
RGDP	2.84	1.96	0.008
DEPO	6.04	3.82	0.002
PROFIT	11.23	3.79	0.000
ASSET	3.87	8.413	0.002
LOAN	6.49	3.09	0.001

The above table 4.2 shows the results for the unit root tests by using Augmented Dickey Fuller (ADF) conducted for the variables under this study. The null hypothesis proposes that a certain variable has a unit root test. This means that the error terms of the variable in question is serially correlated. If the data has unit root test, it is non-stationary as opposed to stationary which is free from unit roots non-stationary process is when the error term of the variables are serially correlated, the mean is not zero and variance is not constant. It is the opposite of stationary process where the data must satisfy the assumptions underlying the classical regression model.

The stationary of data is important because it affects the long run relationship of the variables and model in general. The non-stationary of the variables cause's previous values of the error terms y_{t-1} to have none declining effect on the current value of y_t as time progresses which in turn leads to spurious regression.

The result of the stationary text on level based of augmented dickey-fuller(ADJ) technique is presented the above table. All the variable fail to pair ADJ test in level and in 1st difference all are stationary in the 2nd difference and the study concluded that the variable are integrated in the same order once the stationary status of the variable has been determined one can move to the next test.

4.1.3 Granger causality test

Table 4.3 granger causality test

Null Hypothesis:	Obs	F-Statistic	Prob.
LOG(DEPO) does not Granger Cause LOG(RGDP) LOG(RGDP) does not Granger Cause LOG(DEPO)	15	3.45946 0.12635	0.0721 0.8827
LOG(ASSET) does not Granger Cause LOG(RGDP) LOG(RGDP) does not Granger Cause LOG(ASSET)	15	3.40063 0.79268	0.0747 0.4791
LOG(LOAN) does not Granger Cause LOG(RGDP) LOG(RGDP) does not Granger Cause LOG(LOAN)	15	1.55075 3.70989	0.2591 0.0623
RAO does not Granger Cause LOG(RGDP) LOG(RGDP) does not Granger Cause RAO	15	0.54507 0.49654	0.5961 0.6229
LOG(ASSET) does not Granger Cause LOG(DEPO) LOG(DEPO) does not Granger Cause LOG(ASSET)	15	1.71902 5.26871	0.2282 0.0274
LOG(LOAN) does not Granger Cause LOG(DEPO) LOG(DEPO) does not Granger Cause LOG(LOAN)	15	2.05792 2.76264	0.1784 0.1109
RAO does not Granger Cause LOG(DEPO) LOG(DEPO) does not Granger Cause RAO	15	2.29405 1.55316	0.1514 0.2586
LOG(LOAN) does not Granger Cause LOG(ASSET) LOG(ASSET) does not Granger Cause LOG(LOAN)	15	5.48893 0.97138	0.0246 0.4116
RAO does not Granger Cause LOG(ASSET) LOG(ASSET) does not Granger Cause RAO	15	7.42528 0.55430	0.0106 0.5912
RAO does not Granger Cause LOG(LOAN) LOG(LOAN) does not Granger Cause RAO	15	1.15076 2.69275	0.3550 0.1160

Granger causality test is considered a useful technique for determining whether one time series is good for forecasting the other conducted Granger Causality to find out if the variables can be predicted from the others, specifically we want to know whether Asset, deposit, loan and advances and profit of commercial banks in Ethiopia can be used to predict the RGDP. The granger causality approach to the problem of whether “x” causes “y” to see how much of the current “y” can be explained by value of “y” and then to see whether adding lagged value of “x” can compare the explanation “Y” is said to granger cause by “x” if “x” help in the prediction of y or equivalently, if the coefficient on the logged “x” are statistically significant.

The table 4.3 shows that the study adopted pair wise granger causality test of mainly examine the casual relation. Between RGDP deposit loan and advance profit and total asset therefore, the result shows under the study found there is no causal relationship between assets, profit, deposit

and loan advance to the respective variables because p value of all greater than 0.05 in both cases.

4.1.4 SERIAL CORRELATION TEST (LM TEST)

Table 4.4 serial correlation test

Breusch-Godfrey Serial Correlation LM Test:

Obs*R-squared	1.083670	Prob. Chi-Square(2)	0.5817
---------------	----------	---------------------	--------

Test Equation:

Dependent Variable: RESID

Method: Two-Stage Least Squares

Date: 06/16/18 Time: 14:05

Sample: 2001 2017

Included observations: 17

Presample missing value lagged residuals set to zero.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.301752	2.789491	0.108174	0.9160
LOG(ASSET)	-0.315902	0.785877	-0.401973	0.6962
LOG(DEPO)	0.546202	1.301119	0.419794	0.6835
LOG(LOAN)	-0.238486	0.806423	-0.295733	0.7735
RAO	-0.227978	4.517660	-0.050464	0.9607
RESID(-1)	0.243069	0.467201	0.520265	0.6142
RESID(-2)	-0.289316	0.373117	-0.775403	0.4560

R-squared	0.063745	Mean dependent var	-3.75E-15
Adjusted R-squared	-0.498008	S.D. dependent var	0.230279
S.E. of regression	0.281845	Akaike info criterion	0.597983
Sum squared resid	0.794367	Schwarz criterion	0.941071
Log likelihood	1.917145	Hannan-Quinn criter.	0.632086
F-statistic	0.113476	Durbin-Watson stat	2.185114

As per the result shown in the table the Breusch-Godfrey correlation LM test given the observed r-value $p = 0.5817$ which is insignificant and greater than $p = 0.05$ which favors the null hypothesis which says the residential is not serially correlated so we are getting the result that the model residential value is not seriously correlated.

4.1.5. Test of Heteroskedasticity

TABLE 4.5 TEST OF HETROSECEDACITY

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	0.954243	Prob. F(4,12)	0.4668
Obs*R-squared	4.102461	Prob. Chi-Square(4)	0.3923
Scaled explained SS	1.679067	Prob. Chi-Square(4)	0.7945

Test Equation:

Dependent Variable: RESID^2

Method: Least Squares

Date: 05/27/18 Time: 11:39

Sample: 2001 2017

Included observations: 17

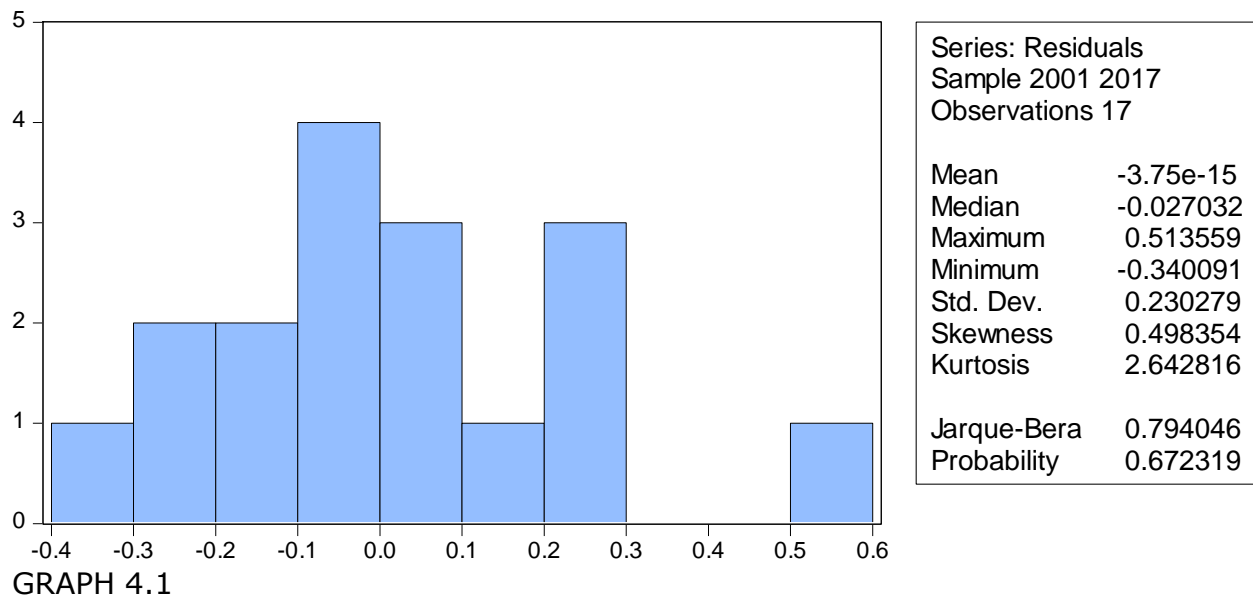
HAC standard errors & covariance (Prewhitening with lags = 2 from AIC
maxlags = 2, Bartlett kernel, User bandwidth = 6.0000)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.465608	0.160532	-2.900408	0.0133
LOG(ASSET)	-0.030821	0.023152	-1.331220	0.2079
LOG(DEPO)	0.223119	0.121254	1.840098	0.0906
LOG(LOAN)	-0.180000	0.135028	-1.333058	0.2073
RAO	0.079436	0.290142	0.273782	0.7889

R-squared	0.241321	Mean dependent var	0.049909
Adjusted R-squared	-0.011572	S.D. dependent var	0.065938
S.E. of regression	0.066319	Akaike info criterion	-2.348765
Sum squared resid	0.052778	Schwarz criterion	-2.103702
Log likelihood	24.96450	Hannan-Quinn criter.	-2.324405
F-statistic	0.954243	Durbin-Watson stat	1.174777

Heteroskedasticity is systematic patterns in the errors where variance of the error are not constant (Gujarati, 2003). Heteroskedasticity makes ordinary least square estimators not efficient because the estimated variance and covariance of the coefficient (BI) are biased and inconsistent and thus, test of hypothesis are no longer valid. Furthermore, heteroskedasticity is a systematic pattern errors are not constant, it makes the ordinary least square estimators not efficient as per the Breusch-Pagan-Godfrey test the null hypothesis that the variance in the residual is homoscedasticity, this can be true if only if the p-value of adjusted r squared is 0.3923 greater than 0.05 this indicates that we would have not rejecting the null hypothesis of no heteroskedasticity problem. As it is presented in the table above residual in the predicted value is insignificant to heteroskedasticity because its correspondingly p-value is strongly greater than 0.05.

4.1.6 . Test of normality



Normality test of data is applied to determine whether data is well modeled by normal distribution or not and to compute how likely an underlying random variable is to be normally distributed. The histogram presented in graph provides useful graphical representation of data.

As Jarque bera is statistically insignificant because the corresponding p- value , 0.67 which is greater than standard p- value 0.05, therefore it is possible to generalize in the way that the residuals are normally distributed and do not have potential problem on the specified model.

4.2. Empirical analysis and discussion of results

TABLE 4.6 REGRESSION TABLE

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.063926	0.660030	7.672263	0.0000
LOG(ASSET)	0.407585	0.145424	2.802729	0.0160
LOG(DEPO)	0.165662	0.059598	2.779675	0.0167
LOG(LOAN)	0.458043	0.125467	3.650711	0.0033
RAO	-5.583379	2.457315	-2.272146	0.0423
R-squared	0.954635	Mean dependent var		26.06000
Adjusted R-squared	0.939513	S.D. dependent var		1.081165
S.E. of regression	0.265903	Sum squared resid		0.848451
F-statistic	63.13001	Durbin-Watson stat		1.773086
Prob(F-statistic)	0.000000	Second-Stage SSR		0.848451
J-statistic	0.000000	Instrument rank		5

The study used the two stage least square (TSNLS and ARMA) form of regression results one can be observed the analysis and this analysis have been made the three of respectively f-statistics and adjusted R^2 .

F-value of 63.144(sig0.000) for RGDP as economy proxies it clearly shows that there is strong relationship between dependent and independents variables which are being modeled in this study. R^2 is called the coefficient of determination and it gives the adequacy of the model in general .the numerical value of adjusted R^2 is 94%.this indicates that on an adjusted because, the independent variable are collectively 94%related to the dependent variable RGDP to put in other way, the change that occur in the dependent variable 94% are attributable to the independent variables.

According to chpis brook (2008) DW has 2 critical value; an upper critical value (DL: 1.57) and lower critical value (DL: 1.42).The null hypothesis of no auto correlation can either be rejected or not rejected, to reiterate the null hypothesis is rejected and the existence of positive auto correlation presumed if DW is less than the lower critical value and the existence of negative auto correlation presumed if DW is greater than 4 minus the lower critical value (i.e. 4-dl) the null hypothesis is not rejected and no significance residual auto correlation is presumed if DW is between the upper and 4 minus the upper limit (i.e. 4dl).

In our case the value of Durbin-Watson statistics for dependent variable is 1.75, which lies between 1.57 and 2.43 and acknowledge that there is no auto correlation in this study and also the regression model assume that the error term are uncorrelated

4.2.1 The discussion of each variable is presented as follows

A. Deposit

Beta coefficient shows the tendency of an independent variable to respond against the dependent variable, therefore the greater the value the beta indicates the larger impact on dependent variable and vice versa. Thus, in this case the ratio deposit to RGDP has positive and statistically significant relationship with RGDP. This result suggested that the amount of commercial bank deposit increased the economic growth also increased for the regression result to the coefficient of this variables, meaning that a one percent rise in DEP causes RGDP to increase by 0.166%. This signifies increase in deposit account indicate .The commercial bank is all about to collect deposit from a wider customer base hence increasing the amounts available to commercial bank for lending with the increase lending level in the country more funds will be converted in different factor so positively contributes on the economic growth registered.

B) Loan and advance

loan and advance are statistically significant at 5% level showing as it is depicted in the representation table result this variable has a positive coefficient of portray a 1% increase in loan and advances granted by commercial banks is contribute 0.458043% to economic growth in Ethiopia . This can be explained in such a way that the development of commercial bank can act as a catalyst to economic growth by allocating resource in addition the result reflects the extent to which commercial bank allocate society in saving as well as firm use of credit in addition to internal funds. commercial bank have an important function to perform <they can scrutinize and select the plan of enthusiastic entrepreneurs and make the finance available to them Schumpeter(1911) was the most famous theories who strongly supported the idea that there is positive relationship between well-functioning banks and economic growth by providing credit to the entrepreneur for the best profit which leads to technological innovation via mobilizing service.

3) Total Asset

The size of the bank is measured by the total asset they owned. The size is tend to have positive influence with the economic growth measurement to GDP because it gives advantage to the

commercial banks to have more access to the additional financing source especially when declining with liquidity problems and diversification of the risk. It also contributes a lot to the profitability of the bank to create more employment. As per the study, the total asset, which is the proxy variable to the size, has a positive relation with RGDP and is significant. The regression table depicted that a one percent increase in total asset will increase 0.407585% RGDP. It is the measurement to the size of commercial banks by assessing the extent to which commercial banks channel savings to investment, monitor firms, influence corporate governance and undertake risk management relative to the Central Bank (HAUNG, 2005).

4) Profit

Profitability and performance of a bank is key to the economic growth of the most industries. It relies on the availability of finance provided within the economy and is measured by its proxy return on asset (ROA). As per the study conducted in commercial banks in Ethiopia using seventeen years of data, the profitability of banks has a negative relationship and is significant. This means that commercial bank profit increases by 1%, the RGDP of the country decreases by 5%. This is due to the higher capital requirements by commercial banks, which indirectly affect economic growth because the credit supply by the banks decreases and the lending rate also becomes higher. Another reason for this is the government intervention in the ownership of the bank, which makes the big bank well capitalized. Commercial banks are not market-oriented, and finally, high inflation makes the RGDP to be higher so that profit does not approach to influence the growth.

Unit five

Conclusion and Recommendation

5.1 Conclusion

This chapter presents a conclusion of the study .by summarizing the study findings. The study was conducted to assess the contribution of commercial bank to the growth of Ethiopian economy over the period of seventeen years from 2001 to 2017

Commercial Banks play a vital role in the economic development of a country. They accumulate the idle savings of the people and make them available for the investment. They also create new demand deposits in the process of granting loan and purchasing investment securities. They facilitate trade both inside and outside the country by accepting and discounting of bills of exchange. Banks also create the mobility of capital and also they provides service such as accepting deposits, making business loans and offering basic investment products. Schumpeter(1911) argued that efficient financial system plays important role in helping the nation economy to grow and a well-functioning Banks spur technological innovation by offering funds to entrepreneurs who successfully implement innovative products and production process and stimulate the future economic growth and also efficient Commercial banks might affect the Economic growth in three ways:It increases the productivity of investment ,It reduces financial costs and increases the share of savings channeled in to productive investment and It promote savings(PAGANO,1993). A more effiecient fianancial sector channel scarce resource to there most productive use as this occur the Economy will growin its full potential.

For the research purpose the study used deposit loan and advance total asset and profit of commercial bank as explanatory variable RGDP as dependent variable for this study. Augumented dikey piller (ADJ) unit root test granger causality test, two steps least square have been used. Therefore unit root test confirm non stationery of all four variable except deposit at first difference and all become stationary at 2nddifference. The granger causality test confirms there is no unidirectionalcausal relationship with all variables to economic growth variable.

Regression results revealed that among Development indicators of commercial bank deposit loan of advance positively and significantly contribute to the growth .the profitability which is net

profit by proxy ROA has negative but significant association with RGDP. The total asset is positively and significantly contributes to the economy development that is RGDP.

5.2 Recommendation

As per the finding of the study the following recommendations are put down.

- 1) As deposits of commercial banks have positive association with economic growth .the researcher recommends increasing their levels will help the country economic growth.
- 2)The variable and advance has positive association with the economic growth so to fully realize their contribution to the economic growth of Ethiopia it is necessary to encourage commercial bank to extend credit to private investors and to remove any hindrances that undermine the provision of loan (credit) to the domestic economy and also the commercial banks should strategize how to attract and retain more deposit loan to further improve their lending performance to meet the financial need of economic unit.
- 3) The Total Asset has positive and significant relation with the economic growth so it is more necessary to increase the size of commercial banks in Ethiopia in order to make them more liquid, stable and capable to resist risks in case of financial panic so the stake holders should form strategy and policy to increase their size which make then to contribute the economic growth the nation
- 3) As per finding the casual relation between commercial bank development and economic growth therefore, the entire stake holder should give full attention to enable CBs more influential to the Ethiopian economic growth.
- 4) Finally, this research finding found negative relationship between RGDP and profit. It shows that Commercial Banks profit due to inflation and the profit that declared by the CBS is not financed in the productive sector, due to the difference in the maturity of loans granted by commercial banks and the requirement by the regulatory to rise capital of commercial banks in Ethiopia.due to this it has negative effect to the growth of RGDP. In addition to this I recommend further research has to undertake in order to see again.

References

- Abdul Salam (2013), and Ibrahim MG (2013). Impact of Banking Sector Development on Economics growth: Another look at the Evidence from Nigeria. *Journal of Business Management & Social Science Research (JBM&SSR)* ISSN No 2319-5614 volume 2, No 4
- Abu-Bakr, A., &Gain, I. M. (2013). Impact of banking sector development on economic growth: Another look at the evidence from Nigeria. *Blue Ocean Research Journals*, 2(4). Access Capital Research, *Banking Sector Review 2010*, December 2010.
- ADB. (2001). Financial sector development in the Pacific developing member countries. 1(The Regional Report.
- Aghion, P. and Hewitt, P., 1998, *Endogenous Growth Theory*, MIT Press: Cambridge and London.
- Alex E.O (2012). The Role of Banking in Capital Formation and Economic Growth: the Case of Nigeria Economy *Trans disciplinarily Cognition* Vol 15, 103-11
- Al-Yousif, Y. K. (2002). Financial development and economic growth - Another look at the evidence from developing countries. *Review of Financial Economics*, 11, 131-150
- Assessment on the performance of Ethiopian financial and economic environment, *global journal of Management and business research* volume 14.
- Audu, N. P., & Okumoko, T. P. (2013). Financial Development and Economic Growth in Nigeria. *European Journal of Business and Management*.Vol.5, No.19.
- Beck, T., Cull, R., and Jerome, A. Bank Privatization and Performa CHAPTER IVRESEARCH METHODOLOGY page 197-220
- Bwire, T., & Musiime, A. (2006). Financial Development and Economic Growth Nexus: Empirical Evidence from Uganda. *Makerere University BusinessSchool, Uganda*.
- EFFECTS OF FINANCIAL DEEPENING ON ECONOMIC GROWTH IN KENYA *International Journal of Business and Commerce* Vol. 4, No.07 [01-50]

(ISSN: 2225-2436)

- (King & Levine, 1993b), Finance and Growth : Schumpeter Might be Right, Quarterly Journal of Economics, 108(3), PP 717-37
- Levine R. (1997) Financial Development and Economic Growth: view and agenda, Journal of Economics, 35 688-726
- (Levine R. 2003) More on financial and growth: more finance, more growth? Federal Reserve bank of St Louis
- (Levine, 2005). Finance and Growth: theory and Evidence, handbook of Economic Growth, Vol 1, pp 865-934(Lynch, 1996).
- McKinnon (1973), Money and Capital in Economics Development, the Brooking institution, Washington DC
- Patrick (1966) Financial Development and Economics Growth in Underdeveloped Countries, Economic Development and Cultural Change Vol 14 no 174-89
- (Robinson, 1952) the generalization of the general theory, in the rate of interest and other essays London: Macmillan pp 67-142
- (Roman, 2012). The link between Financial Development and Economics Growth in Ethiopia, research paper, Addis Ababa University, Ethiopia
- Samson and Abass (2013) Does depositing money in bank impacting economics growth? Evidence from Nigeria, African Journal of Business Management, Vol 7(3), 196-205
- Schumpeter (1912), theories der wirtschaftlichen entwicklung (the theory of Economics Development) Dunker & humblot leipzig (translated by redvers opie, Cambridge, MA, Harvard University Press 1934

ANNEX 1

Null Hypothesis: D(ASSET,2) has a unit root
 Exogenous: Constant, Linear Trend
 Lag Length: 2 (Automatic - based on SIC, maxlag=3)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-8.413189	0.0002
Test critical values:		
1% level	-4.992279	
5% level	-3.875302	
10% level	-3.388330	

*MacKinnon (1996) one-sided p-values.

Warning: Probabilities and critical values calculated for 20 observations
 and may not be accurate for a sample size of 12

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(ASSET,3)
 Method: Least Squares
 Date: 05/28/18 Time: 13:23
 Sample (adjusted): 2006 2017
 Included observations: 12 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(ASSET(-1),2)	-6.829367	0.811745	-8.413189	0.0001
D(ASSET(-1),3)	4.464200	0.649998	6.868021	0.0002
D(ASSET(-2),3)	1.721970	0.362598	4.748984	0.0021
C	-8.99E+10	1.82E+10	-4.936372	0.0017
@TREND("2001")	1.47E+10	2.29E+09	6.412618	0.0004
R-squared	0.969164	Mean dependent var		1.16E+09
Adjusted R-squared	0.951543	S.D. dependent var		5.89E+10
S.E. of regression	1.30E+10	Akaike info criterion		49.70354
Sum squared resid	1.18E+21	Schwarz criterion		49.90559
Log likelihood	-293.2213	Hannan-Quinn criter.		49.62874
F-statistic	55.00163	Durbin-Watson stat		1.835530
Prob(F-statistic)	0.000023			

Null Hypothesis: D(DEPO,2) has a unit root
 Exogenous: Constant, Linear Trend
 Lag Length: 1 (Automatic - based on SIC, maxlag=3)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-6.041886	0.0019
Test critical values:		
1% level	-4.886426	
5% level	-3.828975	
10% level	-3.362984	

*MacKinnon (1996) one-sided p-values.
 Warning: Probabilities and critical values calculated for 20 observations
 and may not be accurate for a sample size of 13

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(DEPO,3)
 Method: Least Squares
 Date: 05/28/18 Time: 13:23
 Sample (adjusted): 2005 2017
 Included observations: 13 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(DEPO(-1),2)	-6.746352	1.116597	-6.041886	0.0002
D(DEPO(-1),3)	3.190679	0.606041	5.264787	0.0005
C	-5.34E+10	2.24E+10	-2.386929	0.0408
@TREND("2001")	1.07E+10	2.95E+09	3.611102	0.0056
R-squared	0.832486	Mean dependent var		-9.18E+09
Adjusted R-squared	0.776649	S.D. dependent var		4.53E+10
S.E. of regression	2.14E+10	Akaike info criterion		50.66133
Sum squared resid	4.13E+21	Schwarz criterion		50.83516
Log likelihood	-325.2986	Hannan-Quinn criter.		50.62560
F-statistic	14.90899	Durbin-Watson stat		1.758567
Prob(F-statistic)	0.000774			

Null Hypothesis: D(LOAN,2) has a unit root
 Exogenous: Constant, Linear Trend
 Lag Length: 1 (Automatic - based on SIC, maxlag=3)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-4.586031	0.0158
Test critical values:		
1% level	-4.886426	
5% level	-3.828975	
10% level	-3.362984	

*MacKinnon (1996) one-sided p-values.
 Warning: Probabilities and critical values calculated for 20 observations
 and may not be accurate for a sample size of 13

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(LOAN,3)
 Method: Least Squares
 Date: 05/28/18 Time: 13:24
 Sample (adjusted): 2005 2017
 Included observations: 13 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LOAN(-1),2)	-2.662098	0.580480	-4.586031	0.0013
D(LOAN(-1),3)	0.637511	0.368863	1.728314	0.1180
C	4.53E+09	1.11E+10	0.407077	0.6935
@TREND("2001")	79138478	1.04E+09	0.076028	0.9411

R-squared	0.839628	Mean dependent var	2.67E+09
Adjusted R-squared	0.786170	S.D. dependent var	2.99E+10
S.E. of regression	1.38E+10	Akaike info criterion	49.78225
Sum squared resid	1.72E+21	Schwarz criterion	49.95608
Log likelihood	-319.5846	Hannan-Quinn criter.	49.74652
F-statistic	15.70647	Durbin-Watson stat	1.924800
Prob(F-statistic)	0.000639		

Null Hypothesis: D(RAO,2) has a unit root
 Exogenous: Constant, Linear Trend
 Lag Length: 0 (Automatic - based on SIC, maxlag=3)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-11.23975	0.0000
Test critical values:		
1% level	-4.800080	
5% level	-3.791172	
10% level	-3.342253	

*MacKinnon (1996) one-sided p-values.
 Warning: Probabilities and critical values calculated for 20 observations
 and may not be accurate for a sample size of 14

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(RAO,3)
 Method: Least Squares
 Date: 05/28/18 Time: 13:25
 Sample (adjusted): 2004 2017
 Included observations: 14 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(RAO(-1),2)	-1.257952	0.111920	-11.23975	0.0000
C	0.003158	0.005652	0.558761	0.5875
@TREND("2001")	-0.000319	0.000540	-0.590727	0.5666

R-squared	0.927705	Mean dependent var	0.004614
Adjusted R-squared	0.914561	S.D. dependent var	0.026761
S.E. of regression	0.007822	Akaike info criterion	-6.676249
Sum squared resid	0.000673	Schwarz criterion	-6.539308

ANNEX 2 ROW DATA

	RAO	ASSET	DEPO	LOAN	RGDP
	0.78770672316				
2001	3547	25866147930	20456398461	11209644507	63343100000
	0.83837860341				
2002	03198	27801502230	21631757285	9795108834	64990700000
	0.82304971669				
2003	55311	48159817484	23868986806	10176109012	66586000000
	0.83115099022				
2004	35314	37744372352	29881925606	12701708170	74397000000
	0.84333998540				
2005	64866	46229831033	35241132629	14926762401	83804000000
	0.85365560026				
2006	55414	52978274817	41079089163	18900144420	93474000000
	0.86104878595				
2007	10571	66127598199	49452636000	22043267000	104499000000
	0.87224118034				
2008	35931	77338821200	61869320000	34748901000	116467735000
	0.87074745837				
2009	34842	98846765000	75248525000	33454611000	128523164000
	0.86643034029				
2010	12954	124466777367	95815133000	40327091000	141187000000
	0.86113432081				
2011	21432	179385277101	135745701000	52933258000	475600000000
	0.87085971291				
2012	61828	236810556180	173683337000	90722987000	517000000000
	0.87675920012				
2013	87564	292647589246	240670407000	106717228000	568000000000
	0.87362536335				
2014	34946	401217964463	299450527000	142639850000	627000000000
	0.86927922109				
2015	28421	559602405463	413030526000	176492767000	692000000000
	0.87004496865				
2016	41348	630939020672	542365109000	182801262000	747000000000
	0.86940373508				157710000000
2017	37161	735128000000	556173911051	226008299000	0

Annex 4 test of co integration

Date: 05/29/18 Time: 11:19

Series: ASSET DEPO LOAN RAO RGDP

Sample: 2001 2017

Included observations: 17

Null hypothesis: Series are not cointegrated

Cointegrating equation deterministics: C @TREND

Long-run variance estimate (Prewhitening with lags = -1 from SIC maxlags = -1, Bartlett kernel, User bandwidth = 8.0000)

No d.f. adjustment for variances

Dependent	tau-statistic	Prob.*	z-statistic	Prob.*
ASSET	-5.443815	0.0848	-12.10882	0.7805

DEPO	-10.25633	0.0002	-16.08139	0.4266
LOAN	-3.038932	0.7727	-7.045285	0.9847
RAO	-5.723408	0.0599	-19.69973	0.1421
RGDP	-2.870050	0.8275	-14.89785	0.5384

*MacKinnon (1996) p-values.