Role of Commercial Bank of Ethiopia in Fostering Ethiopian Economy

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Abstract

The purpose of this paper is to investigate the role of commercial bank of Ethiopia on the Ethiopian economic growth. Earlier studies in this field have argued that a link always exist between the commercial banks and economic growth in every economy. Based on this the study examined the role commercial bank of Ethiopia played on economic growth for a period of 32 years from1981-2012. The researcher used different statistical and econometrical analyses such as Unit root test, Cointegration test, and Granger causality test and regression analysis in order to achieve the objectives of the study. Augmented Dickey Fuller test (ADF) shows the stationary of all variables at first difference. Johansen cointegration test confirms the cointegreration of three variables in trace statistics and two variables in maximum Eigen value test. The Granger-Causality test confirms the bidirectional causal relationship of deposits, reserve and capita, asset and profitability with economic growth. On the other side unidirectional causal relationship exist between investments and loan and advancement in economic growth. Regression results indicate that deposits, investments, asset and reserve and capital have significant positive impact on economic growth of Ethiopia. It is recommended that the policy makers should make policies to enhance the banking sector in Ethiopia because banking sector is significantly contributing in the economic growth of Ethiopia.

Introduction

According to Kent (1961) bank is an organization whose principal operation is concerned with the accumulation of temporarily idle money of the general public for the purpose of advancing to others for expenditure. The word bank is used in the sense of Commercial Bank. It is Germanic origin through some person traced its origin to French word "banqui" and the Italian word "banco" it refers to a bench for keeping, lending and exchanging of money or coins in the market place by money lenders and changers. There was no such a work as banking before 1640, although the practice of safely keeping and saving flourished in the temple of Babylon's early as 2000 B.C (Jhingan 2001). The first bank "the bank of Venice "was established in Venice, Italy in 1157 but modern banking began with the English gold smith only after 1640 even though the modern began in 1960. But modern sense bank was first emerged in the Bengal presidency as the bank of Bengal in 1806.

Modern banking in Ethiopia was introduced after the agreement that was reached in 1905 between Emperor Minilik II and Mr.Ma Gillivray, representative of the British owned National Bank of Egypt. Following the agreement, the first bank called Bank of Abysinia was inaugurated in Feb.16, 1906 by the Emperor. Within the first fifteen years of its operation, Bank of Abysinia opened branches in different areas of the country in Harar (Eastern Ethiopia), Dire Dawa, Dessie and Djibouti. By 1931 Bank of Abyssinia legally replaced by Bank of Ethiopia shortly after Emperor Haile Selassie came to power. The new Bank, Bank of Ethiopia, was a purely Ethiopian institution, was the first indigenous bank in Africa, and established by an official decree on August 29, 1931 with capital of £750,000. In 1941, another foreign bank, Barclays Bank, came to Ethiopia with the British troops and organized banking services in Addis Ababa, until its withdrawal in 1943.

Then on 15 April 1943, the State Bank of Ethiopia commenced full operation after 8 months of preparatory activities. In 1945 and 1949, the Bank was granted the sole right of issuing currency and deal in foreign currency. The Bank also functioned as the principal Commercial Bank in the country and engaged in all commercial banking activities.

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 investment. They also create new demand deposits in the process of granting loans and purchasing investment securities. They facilitate trade both inside and outside the country by accepting and discounting of bills of exchange. Banks also increase the mobility of capital and also they provides services such as accepting deposits, making business loans, and offering basic investment products. Commercial Bank can also refer to a bank or a division of a bank that mostly deals with deposits and loans from corporations or large businesses, as opposed to individual members of the public.

Generally, economic growth and development is unthinkable without the participation of financial sector in general and commercial banking in particular, because 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 investment. They also create new demand deposits in the process of granting loans and purchasing investment securities. They facilitate trade both inside and outside the country by accepting and discounting of bills of exchange. Banks also increase the mobility of capital. As a result bank and economic growth are the two side of coin, so this study will specially focus on role of Commercial Bank of Ethiopia in fostering Ethiopian economy.

Statement of the Problem

Economic development is unthinkable without the participation of financial institution in general and investment of public, private, cooperative and foreign investors in particular. But their participation in the economy has not been valued especial in developing countries, without   involvement of commercial banks.

The Ethiopian economic growth is the result of different sectors, but the contribution of financial institution in general and Commercial Bank of Ethiopia in particular has not been recognized this is why the researcher intended to do in this area. Therefore this study attempted to analyze the role played by Commercial Bank of Ethiopia in the development of Ethiopian economy.

Objectives of the study

General objectives of the study

The general objective of this study is   to analyze the role of Commercial Bank of Ethiopia towards the development of Ethiopian economy.

Specific objectives

- To study the role of Commercial Bank of Ethiopia profitability, asset loan and advancement, deposit, investment, reserve and capital on the Ethiopian economy.
- To assess the long run relationship between role played by Commercial Bank of Ethiopian on the Ethiopian economy
- To assess the bidirectional or   unidirectional relationship between real GDP with deposit, asset, profitability, reserve and capital, loan and advance and investment.

Significance of the study

The findings of the research enable the commercial bank of Ethiopia to know whether they are contributing to the growth of Ethiopian economy or not. It also will serve as a source of document and invite any individual researcher to make further research.

Hypothesis Development

H_0: CBE's profitability does not contribute to the Ethiopian economic growth.

H_1: CBE's profitability contributes to the Ethiopian economic growth.

H_0: CBE's Loan and advances does not contributes to the Ethiopian economic growth

H_2: CBE's Loan and advances contribute to the Ethiopian economic growth.

H_0: CBE's asset does not contribute to the Ethiopian economic growth.

H_3: CBE's asset contributes to Ethiopian economic growth.

H_0: CBE's deposit does not contribute to the Ethiopian economic growth.

H_4: CBE's deposits contribute to the Ethiopian economic growth.

H_0: CBE's investments do not contribute to the Ethiopian economic growth.

H5: CBE's investments contribute to the Ethiopian economic growth.

H_0 CBE's reserve and capital does not contribute to the Ethiopian economic growth.

H_6: CBE's reserve and capital does not contribute to the Ethiopian economic growth.

Data and Methodology

Source and Type of Data

The research used quantitative research design and time series data for 32 years from 1981-2012. Data were collected from unpublished documents of Commercial Bank of Ethiopia and Minister of Finance and Economic Development (MoFED).

Methodology

Time series is broadly defined as any series of measurements taken at different times. It can be divided in to 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 seven variable namely real growth domestic product, deposit, loan and advance, asset, profit, investment and reserve and capital of Commercial Bank of Ethiopia.

Methods of Data Analysis

To analyze the collected secondary data descriptive methods of analysis (mean, minimum, maximum and standard deviation values), unite root test using Augmented Dickey Fuller (ADF), co integration test using Johansen (1995) co integration test, granger causality test and multiple regression test

are used to analyze the General trends of the data from 1981 to 2012 for the variables which included in the Study.

Multiple Linear Regression model

A multiple linear regression model was used to determine the relative importance of each independent variable to determine economic development. The p-value of explanatory variables was used to test the hypotheses at a 1%, 5% and 10% significance level mostly in this research 5% significant level is used. The multiple linear regressions model for REALGDP PRO ASS DEPO INVES RANDC and LADV shown on equations below. These models were run by using STATA 12 software. The adopted regression models are presented as follows; in the following way:

Log real GDP = f[log(DEP, INVS, LADV, PRO, ASS, RANDC)]

REALGDP = α + $\beta1$ DEPO+ $\beta2$ INVES + $\beta3$ LADV + $\beta4$ PRO + $\beta5$ ASS + $\beta6$ RANDC

Where REALGDP is real gross domestic product

    DEPO=deposit

    INVES =investment

    LADV=loan and advance

    PRO=profit

    ASS=asset

    RANDC= reserve and capital

Data Analysis

Descriptive Statistics

Table - 1 below shows the descriptive statistics of all the variables in the model. In the table, GDP represents the dependent variable while DEP, LAD, PROF, and ASSET represent the independent variables the sample size comprises of 32 observations from the period of 1981 to 2012 of Commercial Bank Ethiopia.

Table 1: Descriptive statistics

Variable	Observation	Mean	Standard deviation	Minimum	Maximum
REAI GDP	32	9.61	0.56	8.87	10.77
Ladv	32	10.09	0.44	9.35	10.87
Ass	32	8.63	0.74	6.87	9.93
Pro	32	10.02	0.52	9.18	11.09
Depo	32	10.82	0.19	10.56	11.18
Randc	32	8.74	0.71	7.91	10.15
Invest	32	9.46	0.45	8.42	10.32
Year	32	1996.50	9.38	1981	2012

Unit Root Test result

Table 2   below 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.

As we can see from the table below almost all the variables were non-stationary at level but with first difference they all become stationary.

Table 2: Augmented Dickey Fuller (ADF)   using STATA 12 at level

Variable	Without trend			With trend	
	Test statistics	5% critical value	P value	Test statistics	5%crtical value
REALGDP	1.17	2.98	0.99	1.63	3.58
ASS	0.40	3.71	0.91	2.41	3.58
LADV	0.59	2.99	7964	4.11	3.58
PRO	0.92	2.98	0.78	4.38	3.58
DPO	1.99	2.98	0.99	0.62	3.58
RANDC	1.23	3.58	0.09	0.26	2.98
INVES	2.51	3.58	0.97	2.55	2.98

Table 2: Augmented Dickey Fuller (ADF) using STATA 12 at level lag 1

Variable	Without trend			With trend	
	Test statistics	5%critical value	P value	Test statistics	5%crtical value
REALGDP	0.78	2.99	0.00	1.65	3.58
ASS	0.04	2.99	0.09	2.68	3.58
LADV	0.20	2.99	0.93	2.95	3.58
PRO	0.03	2.99	0.93	3.61	3.58
DEPO	1.3	2.99	0.99	3.58	3.23
RANDIC	2.51	3.58	0.32	0.35	3.72
INVES	2.57	2.98	0.09	1.37	3.58

Table 2: Augmented Dickey Fuller (ADF) using STATA 12 at First difference and level

Variable	Without trend			With trend	
	Test statistics	5%critical value	P value	Test statistics	5%crtical value
REAILGDP	4.67	2.97	0.00	4.98	3.58
LADV	8.19	2.99	0.00	8.16	3.58
PRO	5.13	2.99	0.00	5.03	3.58
ASS	7.93	2.99	0.00	7.91	3.58
DEPO	2.29	2.99	0.18	2.61	3.58
RANDC	5.64	2.99	0.00	5.93	3.58
INVES	5.42	2.99	0.00	6.10	3.58

Table 2: Augmented Dickey Fuller (ADF)   using STATA 12 at First difference and lag 1

Variable	Without trend			With trend	
	Test statistics	5% critical value	P value	Test statistics	5% critical value
REALGDP	4.52	2.98	0.00	6.18	3.58
LADV	5.67	2.98	0.00	5.68	3.58
PRO	4.01	2.98	0.00	3.88	3.58
ASS	6.93	2.98	0.00	6.62	3.58
DEPO	5.14	2.98	0.09	7.56	3.58
RANDIC	5.69	2.98	0.00	5.99	3.58
INVES	3.66	2.98	0.01	3.95	3.58

Cointegration Test Result

Since the variables are stationary at first difference we proceed to test for co-integration by using Johansen (1995) co integration test at the predetermined lag 1 in these tests, Maximum Eigen value statistic or Trace statistic is compared to special critical values. The maximum Eigen value and trace tests proceed sequentially from the first hypothesis –no co integration– to an increasing number of co integrating. The results of co integration tests for depo, invest, ladv, ass, randc, pro, and real GDP are reported in Table 3. The trace statistic indicates that there is three co integrating vector ($r \geq 1$) exists in the system at the 95 percent confidence level (estimated LR statistic, 213.59>125.61, 136.45>95.75 76.631>69.81 95 percent critical value). In order to cross check for identifying the specific number of co integrating vectors, the Maximum Eigen value statistic is

further employed. This statistic confirms the existence of only two co integrating relationship at the 95 percent confidence level in this system (estimated statics 77.161>46.23and 59.80>40.07)

Table 3: Unrestricted co integration rank test (trace) using E view 7

Hypothesized no of CE	Eigen value	Trace statics	0.05critical value	Pro.	Max Eigen statics	0.05critical value	Pro.
None	0.92	213.59	125.61	0.00	77.16	46.23	0.00
At most 1	0.86	136.43	95.75	0.00	59.80	40.08	0.01
At most 2	0.64	76.63	69.75	0.01	30.35	33.88	0.12
At most 3	0.50	46.28	47.86	0.07	20.92	27.58	0.28
At most 4	0.40	25.36	29.79	0.15	15.46	21.13	0.26
At most 5	0.26	9.90	15.49	0.294	9.22	14.26	0.27
At most 6	0.02	0.67	3.84	0.41	0.67	3.84	0.41

Granger-Causality Test Result

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 others, specifically we want to know whether asset, deposits, loans and advances investment reserve and capital and profitability of the commercial of banks

Ethiopia can be used to predict the GDP. The result of the causality tests are displayed in the table 4 below.

Table 4: Pair wise Granger Causality Tests using Eviews 7

Null hypothesis	Obs	F Statics	prob
DEPO does not Granger Cause REAIGDP	31	2.96	0.09
REAL GDP does not Granger Cause DEPO	31	6.66	0.02
INVES does not Granger Cause REAIGDP	31	3.45	0.07
REAL GDP does not Granger Cause INVES	31	0.48	0.49
ASS does not Granger Cause REAIGDP	31	3.91	0.06
REALGDP does not Granger Cause INVES	31	0.66	0.42
PRO does not Granger Cause REAIGDP	31	2.95	0.09
REAL GDP does not Granger Cause PRO	31	10.49	0.003
RANDC does not Granger Cause REAIGDP	31	3.45	0.07
REALGDP does not Granger Cause RANDC	31	3.2213	0.0835
LADV does not Granger Cause REAIGDP	31	0.0079	0.9298
REAL GDP does not Granger Cause LADV	31	9.7383	0.0042

The above table results shown that deposit (depo), asset (asset) profit (pro) and reserve and capital (randc) their F-statistic greater than their probability

this implies we reject null hypothesis and real GDP does granger-causality with deposit, asset profit and reserve and capital .which means those value confirms the bidirectional causal relationship of deposits, reserve and capital asset and profitability with economic growth. On the other side F statics less than probability which imply investment and loan and advance we found unidirectional causal relationship of investments and loan and advancement with economic growth.

Regression analysis   result

regress reaigdp ladv ass pro depo randc inves

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    Source |     SS       df      MS              Number of obs =     32
-------------+------------------------------        F( 6,  25) =  78.62
     Model |  1.059    6   0.18         Prob > F    = 0.00   Residual |
              0.06   25  0.002          R-squared   = 0.95
-------------+------------------------------        Adj R-squared = 0.94
     Total |  1.12   31   0.036         Root MSE    =  0.05
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Table 5: Regression Result

Reailgdp	Coef	Std.err	T	p>/t/		
Ladv	0.004	0.05	0.08	0.93	-0.97	0.11
Ass	0.55	0.13	-4.38	0.00	0.81	-0.29
Pro	-0.02	0.03	0.68	0.51	0.45	0.09
Depo	0.52	0.12	4.29	0.00	0.27	0.77

Randc	0.16	0.05	3.27	0.003	0.06	0.26
Invest	0.08	0.04	1.89	0.07	0.01	0.16
Cons	8.83	0.37	23.68	0.00	8.06	9.59

In the above table real GDP is a dependent variable and depo ,adv, pro, ass, randc, and inves, are independent variables. Table gives us the value of R square, which represents the correlation between the observed values and predicted values of the dependent variable. R-Square is called the coefficient of determination and it gives the adequacy of the model. Here the value of R-Square is 0.9497 that means the independent variable in the model can predict 95% of the variance independent variable. The p-value is given by 0.000 which is less that 0.05, which shows the significance of our model. The Beta value shows the relationship between the variables in the model, if the value of coefficient is positive it means that independent variables have positive relation with dependent variable i.e. increase in dependent variable is caused by increase in independent variable and if the value of coefficient is negative than independent variables are having negative relation with the dependent variable i.e. decrease in dependent variable is caused by increase in dependent variable. The values of coefficients beta and constant are used to construct the regression model, the model is shown below

Realgdp =8.829+0.004ladv+0.5536ass_0.021pro +0.5293 depo +.1593randc

+o.0765inves

Beta coefficient shows the tendency of an independent variable to respond against dependent Variables. Therefore greater value of beta indicates the larger impact on dependent variable and vice versa. Deposits (0.5293), Investments (0.0765), asset (0.5536) and reserve and capital (0.1593) all are

having positive and significant impact on the economic growth because the p-value is less than 0.05, that mean if DEPO, INVES ASS, and RANDC increases then the GDP will also increase. In table column four shows that variables P-values are <0.05; i.e., deposits (DEPO) has (0.000), investments (INVES) has (0.070), asset (ASS) has (0.000), and reserve and capital   has (0.003) therefore all variables are significant. On the other hand profit and loan and advance have insignificant contribution to real GDP because their p-value higher than 0.05 i.e profit (0.933) and loan and advance (0.505) a Durbin-Watson test is used to test autocorrelation among the data (error term). In Durbin-Watson test, null hypothesis indicate that autocorrelation does not exist in error term and alternative hypothesis depicts that autocorrelation exist in error term. Since regression model has assumption of uncorrelated error term therefore it must be fulfilled to run regression analysis. In the table above indicate value of Durbin Watson as 0.86 which shows that autocorrelation does not exist in error term. Regression   model Overall significance has identifies by F-value (72.742) and it's Probability (0.000)

Conclusion and Recommendations

Conclusion

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 investment. They also create new demand deposits in the process of granting loans and purchasing investment securities. They facilitate trade both inside and outside the country by accepting and discounting of bills of exchange. Banks also increase the mobility of capital and also they provides services such as accepting deposits, making business loans, and offering basic investment products.

under review literature different theoretical review related to the role of bank such as finical institution, function of Commercial Bank, the role of bank in financial system, Commercial Bank deposit, overview of the banking system in Ethiopia and empirical review related to role of Commercial Bank on a given economic has been mentioned

This study investigates the role of Commercial Bank of Ethiopia of in economic growth of Ethiopia. The data used in this study were collected from the period of 1981 to 20102 from Commercial Bank of Ethiopia and MoFED. The descriptive analysis show that PROFIT demonstrated a high deviation from the mean values while real GDP shows less deviation from the mean values Augmented Dickey Fuller (ADF) unit root test confirms all the variables were non-stationary at level but with first difference they all become stationary. Johansen cointegration test confirms the cointegration of three variable in trace statistics and two variable in maximum Eigen value test. Granger causality test corroborates the bidirectional causal relationship of deposit, asset, reserve and capital and profit with economic growth. On the other side we found unidirectional causal relationship of investments and loan and advancement. Regression results indicate that deposits, investments, asset, reserve and capital have significant positive impact on economic growth of Ethiopia on the other hand loan and advancement and profit has no significant contribution the Ethiopian economic growth.

Recommendations

- Expand asset and deposit of Commercial Bank of Ethiopia
- Since profit and loan advance is less significant to growth, the bank better improve its profit and loan and advancement
- Make policies that enhance the banking sector in Ethiopia

155

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