
DO PRIVATE BANKS AFFECT ETHIOPIA'S ECONOMIC GROWTH?

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ABSTRACT

Introduction: Major activities of private sector banks promote changes in a country's economic progress. Many studies have concentrated on the general policy of customer service. As a result, the goal of the study is to look into the impact of private banks on Ethiopia's Gross Domestic Product (GDP) growth.

Methods: Time-series data of the National Bank from 2011 to 2020 is studied using a dynamic-factor model that is flexible for multi-variable autoregressive data.

Results: The result indicates that mobilization of deposits and domestic investment have a strong positive impact on Gross Domestic Product (GDP), whereas foreign exchange and credit services have a significant negative impact.

Conclusion and suggestion: Private banks play an important role in Ethiopia's GDP growth. Therefore, in order to boost economic growth, banks should collect deposits from all over Ethiopia and use them to fund viable investment initiatives.

INTRODUCTION

Banks have been regarded for a long time as a source of economic growth because they manage resources by mobilizing and diverting funds from surplus to deficit economic units. Ethiopia's government promulgated the Monetary and Banking Proclamation of 1994, which formed the Ethiopian National Bank as a judicial body and detailed its principal activities. This is widely regarded as a watershed moment throughout the history of banking and finance, as private banks in the area are now permitted to carry out business in the country. Ethiopia's booming economy is spurring increased banking investment sector, which is extending the industry sectors where more private banks are

forming. Investors are attracted to the private banking sector due to the performance and attractive earnings as reported by private banks yearly, in the belief that the value of their property will increase and benefits value of the stock will be high in the future (Befikadu, 2015).

The banking sector's growth in general and private banks' growth in particular necessitates potential policy steps to bridge the gap between private banks' primary activity and the rise of the economy. Banks, on either end, have the potential to accelerate the progress and development of the economy is depending on the financial system's overall health, soundness, and stability (Alex, 2012). Ethiopia's banking system is in a precarious situation, being underdeveloped and is distinguished by a substantial portion of state ownership that is closed to foreign institutions. Nearly seventy-five percent of the banking sector's assets are held by state-owned commercial banks (Bezabeh and Desta, 2014).

In Ethiopia, among the key private banks that perform commercial bank operations, there is a low level of saving to fund rising consumer demand for credit, which leads to a low level of domestic investment. Banks have an impact on Ethiopian economic growth and play a significant part in the Ethiopian economy. However, they have a variety of issues in their operations, and their contribution to economic growth has been neglected for a long time. The insurance industry, banking industry, institutions of microfinance, credit and saving cooperatives, and the unofficial financial system sectors currently make up Ethiopia's financial sector.

Banks as financial intermediary sectors provide a service that allows customers to conserve money and protect themselves from excessive consumption. Savings banks accumulate funds from which they give credit to businesses and investors (Keating, 2014). Private banks contribute to the country's economic prosperity by carrying out such operations. The fundamental purpose of enabling the private bank sector in the banking business is to mobilize deposits from all corners of the country, offer credit access to investors, and deal with foreign exchanges. In this context, the impact of private banks sector on Ethiopian economic growth is investigated empirically in this paper. According to Melkamu (2015), private banks have an impact on Ethiopia's GDP because of their key tasks, which include deposit mobilization, loans to investors, investment financing, and foreign remittances. Prior research focused on policy, bank performance capacity, service quality, and its impact on customer happiness.

As a result, the purpose of this article is to examine the impact of private banks sector on Ethiopia's Gross Domestic Product (GDP) by focusing on their key tasks of foreign exchange, deposit mobilization, consumer credit, and assistance for domestic projects.

LITERATURE REVIEW

Several decades ago, a large number of experts and analysts argued the connection between commerce and economic growth. Miller (1998), Hicks (1969), Robinson (1952), and Baghehot (1873), are a few of these scientists and researchers. The question was whether financial development, such as private banks, is a source of economic growth or whether economic growth is a key component in enhancing financial development. Robinson (1952) claimed that economic progress increases demand for financial services and products, which promotes financial development.

On the other hand, Camba & Camba (2020) stated that it is difficult to explain growth when finance is excessive. According to Levine (2005) and Bong & Premaratne (2019), economic growth can be influenced by financial sector development when savings are mixed, diversification is high, the risk is minimized, and the interchange of commodities and services is simple.

As Rousseau (1998) and Abusharbeh (2017) study analysis and conclusion reveal, the key function of banking sectors in encouraging economic growth in many ways and techniques is critical in developing countries. For emerging countries, according to Demetriades (1996), there is a bi-directional causal relationship between money supply and GDP. According to Rousseau & Watchel (1998), financial sectors have a visible supportive impact on economic growth in emerging countries, and the major function of banking sectors is to promote economic expansion. According to a study conducted in Turkey by Kar (2000), the causality's direction is significantly influenced by the metrics employed, and the impact of causality analysis may differ across different stages of economic growth and financial development. Christopoulos (2004) asserted that high-frequency factors influence finance in the long run, resulting in economic booms. According to Abusharbeh (2017), banking sectors play an important role in the progression of growth and economic productivity.

In his research on Egypt, Bolbol *et al.*, (2005) found that expanding the financial sector and restructuring the stock and securities market can boost the country's total factor productivity. In his research of the Middle East and North Africa region, Abu Bader (2008) pointed out that bi-directional finance causes growth and vice versa, according to causality, is also valid. They assert that the financial sector aids economic progress by facilitating efficient investment allocation.

Moreover, the authors argue that reform programs must continue in order to encourage savings, investments, and ultimately long-term economic growth. Indeed, numerous measures of economic growth have been used in the literature, such as per capita nominal income, growth in overall productivity, and capital accumulation.

With the same perspective, the banking development has been expressed through several measures such as central bank, total bank credit and reserve credit, and assets to the private sector, all of which are expressed as GDP percentage. According to Levine (2005), the banking and financial industries are one of the most essential sectors that contribute to economic growth. The writers give evidence from many sources from a variety of nations using a variety of measures for both banking economic growth and development.

Some researchers such as Ghali (1999) and Abdelhafidh (2013) backed up this claim. In his analysis, Ghali (1999) discovered a unique causal impact that extends from Tunisia's financial development to its economic growth. His research was conducted using a couple of proxies for financial development including total bank claims in the private sector as a percentage of nominal GDP and total bank deposits as a percentage of GDP.

However, some research suggests that financial development has a large long-term impact and a modest short-term impact on economic growth (Al-Aawad, 2005; Kar et al., 2011). The impact of the private banking sector on economic growth is increasing. According to Levine (2000), panel data is assessed using the generalized method of moments, reveals that the private banking sector's impact on economic growth is increasing. Beck *et al.*, (2000) took a similar method in demonstrating that financial development encourages economic growth, which is achieved through economic productivity rather than investment rate or capital accumulation.

According to Rousseau (2000), banking and market developments are external factors that play a crucial role in the growth process. In Mediterranean economies, Boulila (2004) found strong evidence for the demand-leading hypothesis: as the economy increases, so does the scale of demand in financial sectors, culminating in the expansion of the financial system as a whole. Rioja (2004) also found that in high-income countries financial development has a greater impact on economic growth than in low-income countries.

Based on previous research, it is possible to conclude that the banking sector is critical and vital for economic growth, especially in emerging economies where banking development is important. The question presented here is if this conclusion applies to private banks of Ethiopia which have an impact on the country's economic growth based on these findings. Finally, the researchers construct alternate hypotheses based on the functions of predominantly private banks, as follows:

H₁: Deposit Mobilization of private banks positively or negatively affects the Gross Domestic Product growth of Ethiopia.

Saving mobilization of bank from a vast number of customers will increase deposit accumulation. Once banks have a large amount of money deposited, they can mobilize credit services, which directly contribute to economic growth.

H₂: Credit services of private bank positively or negatively affect the Gross Domestic Product growth of Ethiopia.

Credit services (loans) for entrepreneurs will enhance the economy to be growth.

H₃: Foreign exchange of private bank positively or negatively affects the Gross Domestic Product growth of Ethiopia.

Foreign exchange for export services will play the country's economic growth for local currency replacement for developing nations.

H₄: Domestic investments of private bank positively or negatively affect the Gross Domestic Product growth of Ethiopia.

Domestic investments are an engine of gross domestic product growth by increasing the annual output of a country.

RESEARCH METHODS

Descriptive and econometrics data analysis approaches are applied for the analysis. Regarding econometrics methods, the Dynamic-Factor model is used by using Stata to examine the impact of private banks on the real Gross Domestic Product of Ethiopia. Dynamic-factor model estimates the parameters by maximum likelihood. According to Stata Manual, Dynamic-factor models are a VAR model and flexible models for multivariate time series in which unobserved factors have a vector autoregressive structure (VAR, SUR, SVAR), exogenous covariates are permitted in both the equations for the latent factors and the equations for observable dependent variables, and the disturbances in the equations for the dependent variables may be autocorrelated.

Where in the equations below is a dynamic-factor model used for analysis:

$$y_t = Pf_t + Qx_t + u_t \dots \dots \dots (1)$$

$$f_t = R w_t + A_1 f_{t-1} + A_2 f_{t-2} + \dots + A_{t-p} f_{t-p} + v_t \dots \dots \dots (2)$$

$$u_t = C_1 u_{t-1} + C_2 u_{t-2} + C_3 u_{t-3} + \dots + A_{t-q} f_{t-q} + \varepsilon_t \dots \dots \dots (3)$$

where x_t denotes a set of exogenous or delayed dependent variables, and $P (A_t = n / A_{t-1} = m, A_{t-2} = k..) = P (A_t = n / A_{t-1} = m) = pmn$, because the state variable A_t has p possible values and is order one of Markovian. Markovian proposed powerful approximation in computation of the Kalman filter and the likelihood, and estimated the model in one step by maximum likelihood using the above approximation. The likelihood can be computed at any point in the parameter space, and the likelihood can be maximized using a numerical procedure. However, it should be noted that such a process is only used in practice when the number of parameters in the parameter is minimal,

implying that the dimension of x_t must be modest. Once the parameters have been

Item	Dimension	Definition
y_t	$k \times 1$	“vector of dependent variables”
P	$k \times n_f$	“matrix of parameters”
f_t	$1 \times n_f$	“vector of unobservable factors”
Q	$k \times n_x$	“matrix of parameters”
x_t	$1 \times n_x$	“vector of exogenous variables or lagged dependent variables”
u_t	$k \times 1$	“vector of disturbances”
R	$n_f \times n_w$	“matrix of parameters”
w_t	$1 \times n_w$	“vector of exogenous variables”
A_i	$n_f \times n_f$	“matrix of autocorrelation parameters for $i \in \{1, 2, \dots, p\}$ ”
v_t	$1 \times n_f$	“vector of disturbances”
C_i	$k \times k$	“matrix of autocorrelation parameters for $i \in \{1, 2, \dots, q\}$ ”
ε_t	$k \times 1$	“vector of disturbances or gaussian i.i.d covariance”

estimated, the Kalman filter and smoother may be used to generate nice approximations of f_t and A_t for every t , given the observations $x_1 \dots x_t$ and $x_1 \dots x_T$ respectively.

Table 1. Definitions and Dimensions of Variables

Source: Stata Manual

In simple terms, A dynamic-factor model (also known as a diffusion index) is a series that measures the co-movement of multiple time series (dynamic factor). It is a component of some macroeconomic models. The purpose of a diffusion index is to show:

- the percentage of economic time series data that increases or decreases over a given time interval,
- the proportion of economic time series data that rises or falls over a specific period of time,

which is formally written as:

$X_t = A_t F_t + e_t$ where (f_t^1, \dots, f_t^q) is the vector of lagged factors of the variables in the $T \times N$ matrix X_t (T is the number of observations and N is the number of variables), A_t are the factor loadings, and e_t is the factor error.

The dynamic-factor model incorporates the six models in table two by selecting varying numbers of components and lags:

Table 2. Models Used in the Analysis

“Dynamic factors with vector autoregressive errors”	DFAR	$n_f > 0$	$p > 0$	$q > 0$
“Dynamic model”	DF	$n_f > 0$	$p > 0$	$q = 0$
“Static factors with vector autoregressive”	SFAR	$n_f > 0$	$p > 0$	$q > 0$
“Static factors”	SF	$n_f > 0$	$p = 0$	$q = 0$
“Vector autoregressive errors”	VAR	$n_f = 0$	$p = 0$	$q > 0$

“Seemingly unrelated reg”	SUR	$n_f = 0$	$p = 0$	$q = 0$
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Source: Stata Manual

Where:

- n_f = unobserved factors with some exogenous covariates (individual and time or both)
- p = max lags
- q = max leads

Dfactor can estimate the parameters of SF and SUR models in addition to time-series models. Sureg and var do not enable equality requirements on disturbance covariances, but dfactor can. Regarding to the model specification, the multivariate time series dynamic factor with vector autoregressive model DFAR is adopted to see the relationship between independent variables (deposit mobilized, domestic investment, purchase of foreign currency, credit) and the dependent variable is Gross Domestic Product.

$$GDP\% = f(dmbil, di, crdbil, fexmil\$) \dots \dots \dots (4)$$

$$GDPT = \alpha + \beta_1 dmbil + \beta_2 di + \beta_3 crdbil + \beta_4 fexmil + \varepsilon \dots \dots \dots (5)$$

Whereas Gross Domestic Product, dmbil, di, crdbil, fexmil represents gross domestic product, deposit mobilization in billion-Birr, domestic investment in number, credit in billion Birr, and foreign remittances in million \$ respectively. α stands for constant and $\beta_1 - \beta_4$ are coefficients of the four respective variables and ε stands for error term t stands for the time period from 2010-2011 to 2020-2021. The final model used in this study is:

$$GDP\% = \alpha + \beta_0 dmbil + \beta_1 di + \beta_2 crdbil + \beta_3 fexmil + \varepsilon \dots \dots \dots (6)$$

RESULT AND ANALYSIS

The importance of private banks as indicators for understanding the impact of private banks on Ethiopian GDP growth and as a measure of economic growth.

Table 3. Results of Descriptive Statistics

Stats list	GDP %	Deposit in bill	Credit in bill	Forex mil \$	Domestic #
Mean	9.16	43,33661	170,4884	115,1592	920.1
P50	9.45	34,09995	113,9111	79,515	393
Sd	1.576353	28,92983	147,3275	90,17928	1525.819
Min	6.1	9,7543	36,7404	16,9119	3
Max	11.4	87,5961	476,2375	302,5	5042
Range	5.3	77,8418	439,4971	285,5881	5039
Variance	2.484889	836,935	21705,38	8132,302	2328123
N	10	10	10	10	10

Source: Data processing from Stata “row data analyzed from National Bank of Ethiopia, 2022”

Where:

- GDP % = Annual Gross Domestic Product growth in percentage
- Deposit in bill = Deposit mobilization by private banks in billion Birr
- Credit in bill = Credit service by private banks in billion Birr
- Forex mil \$ = Foreign exchange and remittances by private banks in million \$
- Investment # = Number of domestic investment loanable by private banks

The GDP has an average of nine-sixteen percent, with minimum and highest values of six-one and eleven-four percent, respectively, according to the descriptive statistics presented in table three. The means of deposit, credit, foreign currency acquisition, and domestic investment, in terms of explanatory factors, are 43,33661 billion Birr, 170,4884 billion Birr, 115,1592 million dollars, and 920.1 number of investments, respectively. The average deposit is 43,33661 billion Birr, implying that private commercial banks have an average deposit to GDP ratio of 43,33661 billion Birr every year. Furthermore, the deposit mobilized by private commercial banks, as measured by the deposit-to-GDP ratio, ranged from 9,7543 to 87,5961 billion Birr.

Similarly, private commercial banks's foreign currency purchase and remittance transfers, as measured by the ratio of foreign currency purchase and remittance to GDP, ranged from 16,9119 to 302,50 million dollars. Domestic investment is financed by private banks in Ethiopia, as measured by investment to GDP, is around 920 each year on average, with a minimum and highest number of domestic investments ranged from 3 to 5042. Credit averages 170,4884 billion Birr per year, with a range of 36,7404 to 476,2375 billion Birr. The mean is the year's average value. Domestic investment has high variance, while GDP has a low variance (the range was six-one to eleven-four percent, yielding a low variance).

Hypothesis Testing Result Using Observed Information Matrix (OIM)

After testing the overall model significance, the next step is to test hypotheses using the observed Information matrix (OIM) of likelihood by Wald Test like bootstrapping method.

Table 4. Hypothesis Testing Results

Alternative Hypothesis explanatory variables	Dependent Variable	Coefficient	OIM Std. Errors	z-stats	P>z value	[95% Conf. interval)		Significance decision	
H1	dmbil	GDP%	0.0302886	0.0112954	2.68	0.0070	0.0081499	0.0524272	Accepted
H2	crdbil	GDP%	-0.0101346	0.001805	-5.61	0.0000	-0.0136724	-0.0065968	Accepted
H3	fexmil	GDP%	-0.0046461	0.0022544	-2.06	0.0390	-0.0090646	-0.0002276	Accepted
H4	di	GDP%	0.0006523	0.000121	5.39	0.0000	0.0004151	0.0008895	Accepted

cons GDP% 9.480021 0.3118189 30.4 0.0000 8.868867 10.09117 Accepted

Source: Data processing from Stata regression result

The null hypothesis is that all of the independent variable, factor, and autoregressive component coefficients are zero and non-significant. According to table two test results, a p-value of all independents variables are less than 0.0390 to 0.0000. This demonstrates that all are significant at the significance level test of three-nine percent to zero percent. It means only three-nine percent of explanatory variables are not affecting GDP% independently or are not significant. However, about ninety six-one percent to one hundred percent of explanatory variables are positively or negatively affected GDP% growth independently. Hence our alternative hypothesis test is highly significant and accepted. Based on table four, results credit mobilization and domestic investments are one hundred percent negatively and positively affect gross domestic product growth independently while deposit mobilization and foreign exchange positively and negatively affect gross domestic product growth independently by ninety nine-three percent and ninety six-one percent respectively. This result shows that the higher the explanatory variables causes the higher the impact on GDP% growth significantly. Hence, the significance level of explanatory variables is:

1. Deposit Mobilization : Significant and Positive impact
2. Credit service : Significant and negative impact
3. Foreign exchange : Significant and Negative impact
4. Domestic investments : Significant and Positive impact

Table 5. Dynamic-Factor Model Stata Result

VARIABLES	e.gdp	gdp	observable
dmbil		0.0303*** (0.0113)	
crdbil		-0.0101*** (0.00181)	
fexmil		-0.00465** (0.00225)	
di		0.000652*** (0.000121)	
L3e.gdp	-0.894*** (0.0981)		
var(e.gdp)			0.169* (0.0876)
Constant		9.480*** (0.312)	
Observations	10	10	10

Standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1

Source: own computation using Stata 16 by the help of data from NBE, 2022.

Dfactor-model estimation after we obtain the final model by substitution equations two and three into equation one, as follows:

$$y_t = P(Rw_t + A_1f_{t-1} + A_2f_{t-2} + \dots + A_{t-p}f_{t-p} + v_t) + Qx_t + (C_1u_{t-1} + C_2u_{t-2} + \dots + C_{t-p}u_{t-p} + \varepsilon_t) \dots \dots \dots (7)$$

$$y_t = PRw_t + PA_1f_{t-1} + PA_2f_{t-2} + \dots + AP_{t-p}f_{t-p} + Pv_t + Qx_t + C_1u_{t-1} + C_2u_{t-2} + \dots + C_{t-p}u_{t-p} + \varepsilon_t \dots \dots \dots (8)$$

In our model we have four independents variables and period of 10 years starting from 2011 to 2020.

$$y_{2020} = PRw_{2020} + PA_1f_{2019} + PA_2f_{2018} + \dots + PA_{10}f_{2011} + Pv_{2020} + Qx_{2020} + C_1u_{2019} + C_2u_{2018} + \dots + C_{10}u_{2011} + \varepsilon_{2020}$$

Or

$$y_{10} = PRw_{10} + PA_1f_9 + PA_2f_8 + \dots + PA_{10}f_0 + Pv_{10} + Qx_{10} + C_1u_9 + C_2u_8 + \dots + C_{10}u_0 + \varepsilon_{10} \dots \dots \dots (10)$$

$$y_9 = PRw_9 + PA_1f_8 + PA_2f_7 + \dots + PA_9f_0 + Pv_9 + Qx_9 + C_1u_8 + C_2u_7 + \dots + C_9u_0 + \varepsilon_9$$

↓

$$y_2 = PRw_2 + PA_1f_1 + PA_2f_0 + PA_2f_0 + Pv_2 + Qx_2 + C_1u_1 + C_2u_0 + \varepsilon_2$$

$$y_1 = PRw_1 + PA_1f_0 + PA_2f_0 + Pv_1 + Qx_1 + C_1u_0 + \varepsilon_1$$

$$y_0 = PRw_0 + Pv_0 + Qx_0 + \varepsilon_0 \dots \dots \dots (12)$$

$$y_{2011} = PRw_{2011} + Pv_{2011} + Qx_{2011} + \varepsilon_{2011}$$

At initial year (2011), in equation seven there is no vector of unobservable factors and vector of disturbances effect of auto-correlation against dependent variable but as years increase, in equation six, effect of unobservable factor and vector of disturbances increases more on dependent variable. That is why dfactor model is considered to reduce the unobserved factors auto-correlation with observable dependent variables and exogenous lagged variables. Stata to consider the above calculation for using dfactor model regression and final result of GDP growth equation is:

$$GDP_t = \alpha + \beta_1dm + \beta_2crdm + \beta_3fexm + \beta_4dim + \varepsilon$$

$$GDP \% = 9.480021 + 0.0303dm - 0.0101crdm - 0.00465fexm + 0.000652dim + 0.169\varepsilon$$

An analysis of a dynamic-factor model formula for the impact analysis of private banks on the GDP growth of Ethiopia

The output place's header result describes the estimation sample, reports the maximum log-likelihood function, and reports the Wald test results against the null hypothesis, which states that the coefficients on the independent variables, factors, and autoregressive components are all zero and non-significant. At all tested levels in the

above, the null hypothesis that all parameters except the variance parameters are zero, it is rejected in the above dynamic-factor regression model result from table four. The findings also show that the unobserved component persists and a substantial predictor for each of the observable variables. The coefficients of explanatory variables are the numbers out of parentheses with stars.

Three independent variables are significant at a one percent significance level and one at five percent. As we can see from table four, deposit mobilization, credit, domestic investment and foreign currency, and remittance are proved to be significant at one percent and five percent levels of significance respectively.

As a result of the preceding study of the beta coefficients, total deposit mobilization contributes the most to GDP, followed by domestic investment. At a one percent significance level, deposit mobilization shows a positive association with GDP. As shown in Table four, the deposit mobilization coefficient is 0.0302886, which means that a one billion Birr increase in deposit mobilization by private banks produces a 0.0302886 percent increase in GDP.

This means that when deposit mobilization rises, commercial banks will be able to collect deposits from a larger number of customers, increasing the quantity of money available for lending to investors. Increased lending levels in the country mean more funds are available to invest in various sectors, which has a favorable impact on the country's economic growth.

This is in line with Aurangzeb's (2012) study, which found that the size of a commercial bank's deposit boosts economic growth as measured by GDP. It also follows the instruction of the Ethiopian National Bank, which says that all private banks in Ethiopia mobilize capital (funds) from each shareholder's contribution, operational profitability, and depositors's (customers's) deposit mobilization. With Ethiopian National Bank proclamation order no: MFA/NBEBILLS/001/2011, private banks are required to buy government property bonds on twenty-seven percent of a list of all loan installments. When the deposit mobilization of all private banks rises, the country's economy grows significantly. As a result, private banks play a critical role in facilitating transactions through the use of their mobilized resources in economic activity. At one percent, investment has a positive association with GDP.

The coefficient of investment shown in table four can be interpreted as the number of investments increasing by one GDP growth rate increases by 0.000652 percent. The result is consistent with the study of Andebet (2016) which stated that the primary role of commercial banks is to mobilize deposits and make such loans available recourse for inland domestic investments. Financing the investment sector is one of the primary functions of private Banks that has positive impact on the Economic growth in Ethiopia.

At the five percent significance level, foreign currency purchases and remittance transfers have a negative and significant association with GDP. The coefficient of foreign remittance and purchase can be expressed as follows: a one million dollar increase in foreign remittance and purchase results in a -0.00465 percent decrease in GDP.

On the other hand, credit service has a negative impact on GDP. An increase of one billion Birr in credit services leads to decreasing GDP by -0.0101 percent. Credit in this sense has no positive feedback. This may have happened because the way credit provided for borrowers is an adverse selection or moral hazard. A borrower is expected positively influence GDP by investing for the purpose they propose to borrow money, otherwise most of them do nothing to contribute output to market production.

According to the monitoring and reputation building model (Diamond, 1991), Credit must be provided to those investors who participated in good projects for the second time, based on the reputation of success they build in the first period. Hence, private commercial banks must have the cost of monitoring for monitoring bad and good projects and avoid adverse selection before lending and avoid moral hazards after a loan is made. By doing this private commercial bank, credit mobilization can positively influence GDP growth. Supporting and loan making with domestic investors are the best way as domestic investment has a positive impact on the GDP of Ethiopia.

CONCLUSION

Using time series data from 2011 to 2020, this study look at the impact of private banks on Ethiopian economic growth. The goal of this research is to look into the impact of private banks sector on Ethiopian GDP growth. Deposit mobilization, credit service, domestic investment, and foreign currency acquisition are used as explanatory variables, while economic growth, as measured by GDP, is used as a dependent variable.

The DFAR model finds that deposit mobilization and domestic investment has a favorable and considerable impact on Ethiopia's economic growth. Private bank credit and foreign exchange, on the other hand, have a considerable and negative impact on economic growth among independent factors. When the deposit mobilization of all private banks rises, the country's economy grows significantly. One of the most important and fundamental functions of private banks is to finance the domestic investment sector, which has a favorable impact on Ethiopia's economic growth.

As a result, private banks play an essential part in Ethiopia's GDP progress through completing their basic functions in economic operations. By expanding their branch network, private banks should be able to mobilize deposits from all corners of the country, and private banks should be financing domestic investments in order for GDP to continue to grow. Private banks need to finance domestic investments to keep GDP growing.

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APPENDIX

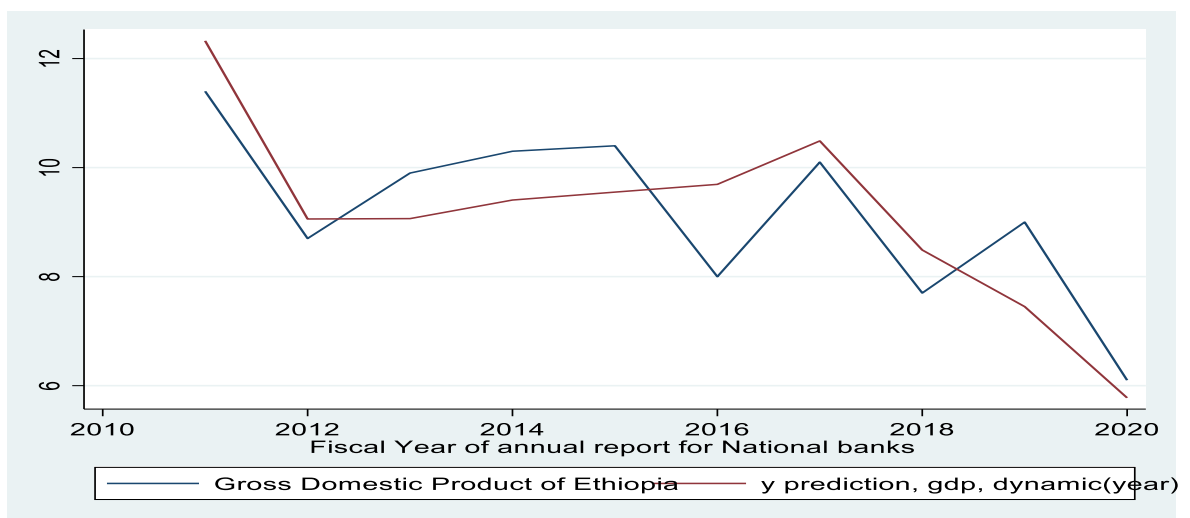


Fig 1. Stata Predicted GDP with Ethiopian GDP (2011 to 2020)

Source: data processing “Stata output by dfactor model GDP predicted with Ethiopia real GDP”

The red one is dynamic factor model predicted GDP while the blue is GDP at hand from 2011 to 2020. More related to both GDP. This is just to see the impact of GDP not for forecasting.