Innovations

The Relationship between Financial Development and Economic Growth in Ethiopia, Time Series Analysis through Using ARDL

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Abstract: *The connection between economic growth and financial development is a contentious topic in today's society. This study made an effort to further this discussion. Examining the connection between Ethiopia's financial development and its economic growth is the main goal of this study. To accomplish this goal, the co-integration test was conducted using the ARDL model; the short-run dynamics of the variables were observed using ECM; the causal relationship between economic growth and financial development was examined using Granger causality; the system's response to shocks to economic variables was evaluated using variance decomposition and impulse response functions. The explanatory variables that were employed included the broad money supply, trade openness, net interest margin, gross national saving, and domestic lending to the private sector. All explanatory factors were employed as proxies for financial development, with the exception of trade openness. The study concluded that there is a long-term, unidirectional relationship between financial development and economic growth. Trade openness, a broad money supply, and domestic loans to the private sector are statistically significant drivers of economic growth. On the other hand, net interest margin was found to be the statistically significant variable that negatively effects economic growth. In Ethiopia, the relationship between financial development and economic growth is mainly unidirectional.*

Keyword: *Co-integration, Financial development and Economic growth*

1. Background of the Study

A contentious question about whether the financial sector genuinely aids the real sector in the process of economic development is the link between financial development and economic growth Levine (1997). Economics has a long history of examining the role of financial development in comprehending national growth patterns. Many hypotheses have been put out over the years to explain how the financial system contributes to the process of economic growth, both theoretical and

empirical. Still, there are unanswered theoretical questions and conflicting empirical findings. Theoretically, it is widely accepted that finance affects growth. However, the exact timing of this influence is less clear. That is, it is unclear whether the expansion of the economy is preceded by an initial increase in the demand for and provision of financial services, or whether sustained economic growth at the outset is a prerequisite for financial development. In the realm of empirical research, numerous conclusions can be drawn. There is evidence in at least four directions, independent of the orientation of individual research, sample coverage, and estimating approaches, among other factors.

Generally speaking, the majority of research on this topic has attempted to determine whether financial development improves economic growth and has examined the strength of this relationship. Other studies have concentrated on finding the channels through which financial intermediation can lead to economic growth.

According to Schumpeter and Opie (1934), financial development may serve as a catalyst for economic expansion. The notion that financial development results in economic expansion was further validated by Gurley and Shaw (1955), McKinnon (1973), Shaw (1973), and Christopoulos and Tsionas (2004). Recent research by Ghirmay (2004) and **Abu-Qarn (2008) strongly supports this viewpoint. According to research done in 2008 by Abu-Bader and Abu-Qarn on the relationship between financial development and economic growth in the Middle East and North Africa, financial development is one of the main factors influencing economic growth in Egypt, Morocco, and Tunisia, respectively.** Furthermore, Indris M. (2016) contended that financial development propels economic growth in her research conducted in Ethiopia. She used private sector credit and broad money (M2) as stand-in variables for financial development in her research.

According to the second view, consistent gains in general economic activities are at least a necessary precursor to a rise in the demand for better financial services. This pattern of economic expansion precedes financial development. **Nicholas Odhiambo** conducted two investigations in 2004 and 2008 that provide empirical support. He revealed in 2004 that growth comes before the development of the financial system, and a similar finding was published in 2008: there is a one-way causal relationship between Kenya's economic growth and financial sophistication. According to other research, the demand for financial services (financial improvement) is driven by economic expansion rather than the other way around (Robinson, 1952).

According to the third perspective, there is a bidirectional relationship between financial development and economic growth, and several studies from throughout the globe have confirmed this relationship. For instance, Akinboade's (1998) study in

Botswana revealed a reverse causal relationship between financial development and economic growth. Bank deposit liabilities and private sector credit were used in this study as stand-in variables for financial development. Numerous investigations, including Greenwood and Jovanovic (1990), Luintel and Khan (1999), and Jedidia B. et al. (2014), supported this conclusion.

According to the fourth position, there is either no causal relationship at all or zero between financial development and economic growth. Several researchers firmly support this viewpoint. Gries, Th. et al. (2009) and Shan et al. (2001) conducted studies that suggested no significant correlation exists between growth and finance. In their 2005 study, "Role of Financial Intermediation in Economic Growth for a Group of 12 Countries in West Africa," Atindehou et al. found evidence that seemed to support Lucas's (1988) earlier theory that the potential influence of finance in determining an economy's growth trajectory may be overstated. In general, (Demetriades and Hussein, 1996; Ram, 1999) support this opinion;

Nearly every least developed nation has implemented the measures that have improved its financial system during the past ten years. Being among the least developed regions, Sub-Saharan Africa requires better financial development. Countries in the region have been interested in promoting financial development since the end of the 1980s. One way to do this is by lowering government regulation of the financial sector (by increasing the efficiency of privatized banks, for example). It has been anticipated that this approach will spur economic growth by increasing savings mobilization or increasing both domestic and international investment (Reinhart & Tokatlidis, 2003). However, a convenient causal link between financial and economic growth is required for such measures to be effective.

1. Statement of the Problem

Determining the causal pattern between finance and economic growth is crucial for policy makers to make informed decisions about which growth and development strategy to implement. Although theoretical and empirical literatures on the subject differ significantly, understanding the nature of the relationship between financial development and economic growth is crucial (Indris, 2016).

There are two main schools of thought that address the relationship between financial development and economic growth: structuralism and neo-structuralism. Waqabaca (2004), Luca (1988), and Robinson (1952) have all endorsed the structuralist school of thought. Robinson (1952) discovered that economic growth always comes after financial improvement; financial improvement is not the primary driver of growth. Economists are "badly over stressed on financial development for growth," according to Lucas (1988). Using time series data, **Waqabaca** (2004) studied the relationship between financial development and economic growth in the context of Fiji. He discovered that there is a positive relationship between the two,

with the majority of the causality flowing from economic growth to financial development.

According to the Goldsmith, McKinnon, and Shaw school of thinking on neo-structuralism, financial development is the primary driver of economic expansion. Various researchers and scholars, including Walter Bagehot (**1873**), Josef Schumpeter (1911), Goldsmith (1969), Hicks (1969), McKinnon (1973) and Shaw (1973), Levine (1997), Jean and Varoudakis (1996), Demetriades and Hussein (1996), Rioja and Valev (2002), have confirmed the viewpoint of this school of thought.

The theoretical underpinnings of the relationship between financial development and economic growth can be found in the early writings of Walter Bagehot (1873), who discovered that financial development is crucial for capital mobilization and growth. Josef Schumpeter (1911) later developed this relationship, but he disagreed that the financial sector's services are crucial for innovation and growth. According to Schumpeter, an advanced financial system is seen as a crucial component of production, and as such, he suggests that financial development drives economic expansion. The relationship between financial development and economic growth, as elucidated by Goldsmith (1969), Hicks (1969), McKinnon (1973), and Shaw (1973), indicates that financial development plays a crucial role in growth in the economy. According to Levine (1997), financial development facilitates the discovery of investment possibilities, lowers costs associated with production, mobilizes savings, fosters technological innovation, and increases investors' willingness to take on risk.

The causal relationship—that is, whether financial development generates growth or growth in the economy—remains unclear despite a variety of studies. Due to Ethiopia's underdeveloped financial system and fluctuating macroeconomic climate, it is challenging to determine the relationship (Indris, 2016). Potential traders and investors bear significant costs as a result of this underdevelopment. Ethiopia continues to be one of the world's most underbanked nations; although the availability of financial services is increasing yearly, this hasn't resulted in a wider banking system's reach."In 2014–15, banks opened 485 new branches, 359 of which were private. This increased the nation's overall branch network to 2693 from 2208 the previous year. The bank branch to population ratio decreased as a result, going from 1:39,833.8 in 2014/15 to 1:33,448.2 in the NBE Annual Report (2014/15). The general public's access to financial services is steadily growing. Furthermore, the notion of financial development might not be adequately captured by using the financial development indicator, which is the ratio of private credit to GDP. As a result, the data collection and study can be broadened by using more varied financial development indicators (Roman T, 2012).

These financial sectors' inefficiencies will increase transaction costs and direct household savings into tangible assets, which will decrease investment and, ultimately, slow economic growth. As a measure of financial development, the efficiency of the banking industry has not been the subject of any empirical research conducted in Ethiopia. Because, as Ayadi, R. et al. (2013) and Saqib N. (2013) indicate, the financial sector's efficiency is a key indication of financial progress. Generally speaking, a thorough study of Ethiopia's financial sector is necessary to determine its precise relationship to economic growth.

2. General Objectives

The main objective of this study is to examine the relationship between financial development and economic growth in Ethiopia, based on time series data.

The findings of this study are anticipated to enhance knowledge of the empirical relationship between financial development and economic growth and to be a valuable contribution to future research on the subject. Moreover, it will provide crucial guidance to policy makers in comprehending and analyzing empirical evidence during the policy-designing process. In conclusion, this study's results will offer fresh perspectives and expanded understanding of the relationship between financial development and economic progress. They may also be used as a guide for future research on this topic.

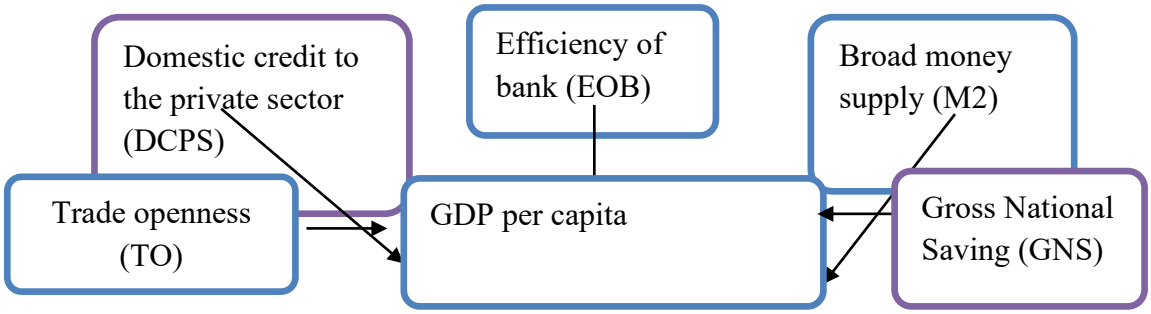
3. Scope of the Study

This study's delimitation was limited by its methodology and coverage. The scope of coverage was restricted to Ethiopian economic operations, encompassing the financial scenario that has been implemented throughout the nation. It spans the chronological years 1981–2016 G.C. The other is methodological scope; to evaluate the link, this study used co-integration analysis, ARDL model, and time series data.

4. Conceptual Framework

literature results, let as draw conceptual explanation of variables

Proxy variables of FD



Self-constructed conceptual Framework

Above figure, it indicates that there are three financial development indicator; those are domestic credit to private sector that provided by bank, efficiency of banks and broad money supply. Trade openness is the factor that influences economic growth, based on the empirical investigation that's mentioned above. In this study GDP per capita is used as the indicator of economic growth.

5. Data and Sources

The research utilized time series data spanning from 1981 to 2016 G.C. A quantitative research approach was used in the study to achieve its stated goal. Secondary data was obtained from the World Bank database, the Ministry of Finance and Economic Development (MoFED), the Ethiopian Economic Association, the National Bank of Ethiopia, annual reports from various NBE and MOFEC publications, and other sources for macroeconomic variables.

(2001).

7. Co-integration test

Whether the underlying variables are I(0), I(1), or a combination of both, this study used the Autoregressive Distributed Lag (ARDL) technique to co-integration or bound procedure for a long-run connection. Pesaran and Shin (1999) devised this strategy, which Pesaran et al. (2001) further expanded.Under such circumstances, co-integration using the ARDL technique produced accurate and effective estimates. The Autoregressive Distributed Lag (ARDL) technique to co-integration aids in identifying the co-integrating vector(s), in contrast to the Johansen and Juselius (1990) co-integration procedure. In other words, every underlying variable can be represented by a single long-term connection equation.

ARDL model is specification are as follows;

$$y_t(GDP) = \mu + \sum_{i=1}^{s} \beta_i\,(GDP) y_{t-i} + \sum_{j=1}^{s} \gamma_j\, Z_{t-j} + \sum_{j=1}^{s} \gamma_j\, DCPS_{t-j} + \sum_{j=1}^{s} \gamma_j\, M2_{t-j} + \sum_{j=1}^{s} \gamma_j\, IEOB_{t-j} + \sum_{j=1}^{s} \gamma_j\, FO_{t-j} + \sum_{j=1}^{s} \gamma_j\, SDGDP_{t-j} + \sum_{j=1}^{s} \gamma_j\, TCGDP_{t-j} \ldots\ldots + et,$$

$$\text{for } i = 1,2,3 \ldots\ldots k, \mathbf{et} \sim \text{iid}(0; \delta 2).$$

To apply autoregressive distributive lag there are the following requirements;

This constitutes a problem since researchers are mainly interested in long-run relationships between the variables under consideration, and in order to resolve this, the concept of co-integration and the ECM becomes imperative. With the specification of ECM, we now have both long-run and short run information incorporated (Nkoro, E. and Kelvin,A., 2016).

The resulting error correction model (ECM) can be specified as follow;

$$d(GDP)1t = \alpha 0 + \sum_{j=1}^{k} a1j\,[d(GDP)]_{t-j} + \sum_{j=1}^{k} a2j\,[d(Z)]_{t-j} + \sum_{j=1}^{k} a3j\,[d(DCPS)]_{t-j} + \sum_{j=1}^{k} a4j\,[d(M2)]_{t-j} + \sum_{j=1}^{k} a5j\,[d(FO)]_{t-j} + \sum_{j=1}^{k} a6j\,[d(EOB)]_{t-j} + \sum_{j=1}^{k} a7j\,[d(SDGDP)]_{t-j} + \sum_{j=1}^{k} a6j\,[d(TCGDP)]_{t-j} + \omega[\beta 0(GDP)_{1t-1} - \beta 1(Z)_{t-1} - \beta 2(DCPS)_{t-1} - \beta 3(M2)_{t-1} - \beta 4(FO)_{t-1} - \beta 5(EOB)_{t-1} + \beta 6(SDGDP)_{t-1} + \beta 7(TCGDP)_{t-1}] + \varepsilon_{jt}$$

Whereω is the error correction parameter and measures the speed of by which economic growth adjust for last period's disequilibria, d indicates the variable in regular first differences and βi are coefficients of the long run relationship in the system.

6. Granger Causality Model

Granger causality was applied in this study to examine which variable comes first; leading variables of this kind are very helpful in forecasting. The Granger causality approach, which is based on a vector error correction model, is used to ensure co-integration among variables. The short-run behavior can be reconciled using the vector error correction model. With co-integration constraint integrated into the specification, the vector error correction model is a restricted vector auto regression model. Thus, if the variables are co-integrated, causality must flow in at least one direction, as demonstrated by Engle & Granger (1987). Using the vector error correction model framework from the long run co-integration equation, the direction of Granger causality—both short- and long-term—is identified.

$$\Delta GDPt = \alpha 0 + \sum_{i=1}^{n} a1i\,\Delta GDPt_{-1} + \sum_{i=1}^{n} \alpha 2i\,\Delta Z_{t-1} + \sum_{i=1}^{n} \alpha 3i\,\Delta DCPS_{t-1} + \sum_{i=1}^{n} \alpha 4i\,\Delta M2_{t-1} + \sum_{i=1}^{n} \alpha 5i\,\Delta FO_{t-1} + \sum_{i=1}^{n} \alpha 6i\,\Delta EOB_{t-1} + \sum_{i=1}^{n} \alpha 7i\,\Delta SDGDP_{t-1} + \sum_{i=1}^{n} \alpha 8i\,\Delta TCGDP_{t-1} + \alpha 7\ ECM_{t-1} + v1t$$

to ascertain whether financial development and economic growth are causally related. Ultimately, tests of variance decomposition and impulse response were used to examine the relationship between financial development and economic expansion.

7. The Unit Root Test

Before conducting ARDL co-integration test, first, we test for the Stationarity of the given time series variables to determine their order of integration. A unit root test is carried out using Phillips-Perron (PP) and Augmented Dickey-Fuller (ADF) test for each variable in the model. To apply ARDL approach the variables used in the regression model should not be an integrated of order two because the computed F-statistics provided by (Pesaran, 2001) are valid only when the variables are I (0), I (1) or the combination of the two.

The Unit Root Test

Variables	Argumentative dickey fuller test statistics (ADF Test)		
	F- stat. at level (with trend and intercept)	F- stat. at 1st diff (with trend and intercept)	Decision
logGDP	0.99	0.02	I[1] at 5%
logDCPS	0.01	-	I[0] at 5%
logTO	0.98	0.00	I[1] at 5%
LogNIM	0.62	0.01	I[1] at 5%
LogM2GDP	0.68	0.04	I[1] at 5%
logGNS	0.99	0.02	I[1] at 5%

Source: EViews 9.0.Unit root test results

As showed in the above table 4.1 the variables are non-stationary at level, except one, and stationary after 1st differencing. All variables are stationary at first difference
with trend and intercept except DCPS, DCPS is stationary at level (before first differencing) by ADF test. Generally, all variable are mixed integrated of order (I [0] and I [1]) that is necessary condition to use autoregressive distributive lag model.

8. Diagnostic and Model Stability Analysis

Table 4.2: The Summery of Diagnostic Test

Test	Null hypothesis	F –stat, DF	F–stat. prob.	Obs. Observed R-squared (Chi sqprob).	decision
Serial correlation	No Serial correlation Among	F(2,21)	0.22	4.49	Fail to reject

	residuals				
Heteroskedasticity	Residual is Homoskedastic	F(10,23)	0.88	5.86	Fail to reject
Normality test	Normal distributed	-	0.90	Not applicable	Fail to reject
RESET Test	No miss specification	(1,22)	0.82	Not applicable	Fail to reject

Source: Author's own computation

9. Bound's co-integration test

The decision rule of bound test, when the computed F-statistic is greater than the upper bound critical value, then the H0 is rejected (the variables are co-integrated). If the F-statistic is below the lower bound critical value, then the H0 cannot be rejected (there is no co-integration among the variables). The bound test of co-integration revealed that the F-statics of (18.48) is above the upper bound at five percent which is (3.79) indicating that there is a long run relationship among variables (existence of co-integration.) or the null hypothesis of no long run relationships exist is rejected.

The Bound Co-integration Test

Null Hypothesis: No long-run relationships exist		
Test Statistic	Value	K
F-statistic	18.48	5
Critical Value for Bounds Significance	Pesaran,2001	
	I[0]Bound	I[1] Bound
10%	2.26	3.35
5%	2.62	3.79
2.5%	2.96	4.18
1%	3.41	4.68
R-squared 0.845417		
Adjusted R-squared 0.778206		

Source: authors own computation

10. Short run Dynamics

The error correction model indicating the short-run dynamics is developed after we proved the existence of a long-run relationship between the variables. The error correction model equation in this case is derived from the equation of ARDL model.

After confirming the existence of co-integration, study conducted the short run dynamics of the dependent variables towards the equilibrium condition. This means, error correction model (ECM) is used to measure the speed of convergence.

Short run estimation result (Dependent variable D(logGDP))

Short Run Estimation Result

Variable	Coefficient	Standard error	t-statistic	Prob.
D(LOGDCPS)	0.0004	0.027	0.018	0.98
D(LOGFO)	-0.0085	0.013	-0.646	0.52
D(LOGFO(-1))	-0.1857	0.042	-4.448	0.00
D(LOGGNS)	0.0035	0.023	0.152	0.87
D(LOGM2GDP)	0.0940	0.039	2.409	0.02
D(LOGNIM)	-0.0043	0.002	-2.175	0.04
CointEq(-1)	-0.1602	0.058	-2.774	0.01

From table 4.4, we can make an inference about the short run relation of the variables. From the short run equation, we found that the coefficient of the error correction term lag one period (ECT (-1) is (-0.16) and significant at five percent significance level with a p-value of (0.01). This coefficient must be negative and significant for a good model. The coefficient of ECT (-1) measures the speed of adjustment towards the long-run equilibrium once the shock happened. The negative of the ECT (-1) coefficient is required to show that the variable comes back towards its long run. The coefficient -0.16 indicates that the deviation of GDP per capita from the long run equilibrium is corrected by the speed of 16.02 % at each period. Additionally, in the short run dynamic equation LOGTO (1), LOGNIM are individually significant at five percent and they negatively influence gross domestic product per capita in the short run. Whereas, LOGM2GDP is a variable that influence gross domestic product positively in short run and it's statistically significant. LOGTO and LOGGNS are insignificant in influencing the gross domestic product in short run. Generally, the short-run dynamics of gross domestic product are significantly explained by the dynamics of financial development proxy variable and lag of itself.

11. Long run estimation result

The below table indicates that the long run coefficients of the explanatory variables. These coefficients are interpreted as coefficients of OLS

Long Run Estimation Result

Variable	Coefficient	Standard error	t-statistic	Prob
LOGDCPS	0.268	0.123	2.170	0.04
LOGTO	1.048	0.143	7.325	0.00
LOGGNS	0.022	0.145	0.153	0.87
LOGM2GDP	0.587	0.118	4.953	0.00
LOGNIM	-0.058	0.019	-2.928	0.00
C	-7.471	1.250	-5.974	0.00

Source: authors own computation

According to table 4.5, the long run relationship between economic growth and financial development proxy variables are presented as follows; LOGDCPS, LOGTO, LOGM2GDP and LOGNIM are statistically significant at five percent level of significance. However, LOGGNS is not statistically significant or gross national saving is not significantly influencing economic growth (GDP per capita).

Domestic credit to private sector that provided by banks is positively influencing economic growth of Ethiopia. This study identified that other thing remaining constant, as domestic credit to private sector provided by banks increase by one percent, gross domestic product of Ethiopia also increase by 26.38% in the study period. This means domestic credit to private sector is an important factor that influences economic growth.

Trade openness is one of the most important indicators of financial development; trade openness is the summation of total imports and total exports of a country. In this study trade openness is positively influencing gross domestic product (economic growth). Statistically, other variables remaining fixed, as trade openness grows by one percent gross domestic product grows by 104.03%. This shows that, trade openness is a significant factor that influences economic growth of Ethiopia.

Money supply to gross domestic product has also positive relation with economic growth. This study identified that, the ratio of money supply to gross domestic product per capita positively influences economic growth. The Coefficient indicates that, other variable remaining fixed, as ratio of money supply to GDP increase by one percent economic growth (GDP) increased by 58.7% and it is statistically significant.

There are two popular ways of measuring bank efficiency. These are: overhead cost and net interest margin (NIM). For overhead cost there is no time series data in Ethiopia. So, net interest margin was used to measure bank performance. This study revealed that, net interest margin has negatively influenced economic growth in Ethiopia. Statistically, other variable remaining fixed, as net interest margin increase

by one present, gross domestic product reduced by 5.83% and it is statistically significant.

12. Granger Causality Test

The following table indicates that, the granger causality of economic growth and financial development proxy variables. Under this section our intention is to identify the causal relationship between economic growth (GDP) and financial development. However, financial development is not explained by one variable. Therefore, the below result indicate that the granger causality among the stated dependent and independent variables.

The Granger Causality Test

Null Hypothesis:	**f-statistic**	**Prob.**
LOGDCPS does not Granger Cause LOGGDP	1.11	0.34
LOGGDP does not Granger Cause LOGDCPS	4.03	0.02
LOGTO does not Granger Cause LOGGDP	4.94	0.01
LOGGDP does not Granger Cause LOGTO	0.30	0.73
LOGGNS does not Granger Cause LOGGDP	0.58	0.56
LOGGDP does not Granger Cause LOGGNS	4.96	0.01
LOGM2GDP does not Granger Cause LOGGDP	2.12	0.13
LOGGDP does not Granger Cause LOGM2GDP	2.13	0.13
LOGNIM does not Granger Cause LOGGDP	1.55	0.22
LOGGDP does not Granger Cause LOGNIM	1.46	0.24
Source: authors own computation		

Table 4.6 shows Pair wise Granger Causality test to mainly examine the causal relations between gross domestic product, domestic credit to private sector, financial openness, gross national saving and net interest margin. The decision rule was determined by comparing p-values with 5% level of significance.

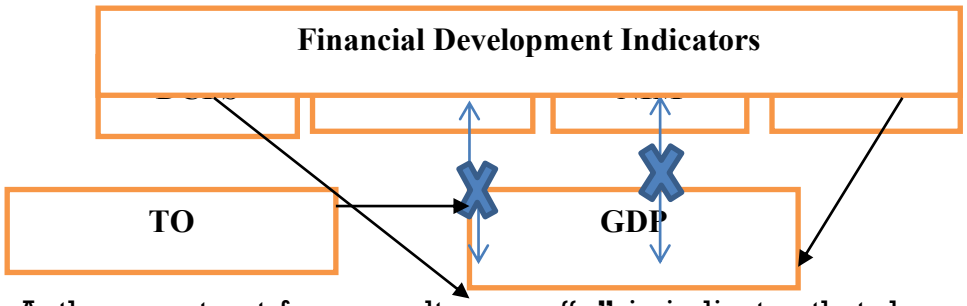
The granger causality test identified domestic credit to private sector does not granger cause gross domestic product. In other words, we fail to reject null hypothesis (does not granger cause) since the p-value greater than 5%. However, the vice versa is not true. This means gross domestic product granger causes domestic credit to the private sector. In other words, economic growth leads domestic credit to private sector, indicating the existence of unidirectional relation between the two.

The study also identified that trade openness does granger cause GDP per capita. This means that, trade openness leads economic growth. Since, the p-value is

significant (at less than five percent). However, the vice versa is not true. Economic growth doesn't lead trade openness, there is unidirectional causality.

Gross national saving does not granger cause GDP per capita. It means that gross national saving not lead economic growth. However, vice versa is not true. Economic growth (GDP per capita) may lead gross national saving (GNS). This also supports unidirectional relation among gross national saving and GDP per capita.

There is no granger causality between GDP per capita, net interest margin, and money supply to GDP. In other words, all of them didn't lead each other's.



Source: Author construct from result **"x"** is indicates that does not granger causality **Graph**

12. Conclusion

Here are the key findings: Domestic Credit to Private Sector: A 1% increase leads to a 26.38% rise in GDP per capita, emphasizing the role of private sector credit in economic growth. Trade Openness: A 1% increase results in a 104.03% increase in GDP per capita, highlighting the significant impact of trade on growth. Money Supply to GDP: A 1% increase correlates with a 58.7% rise in GDP per capita, indicating that effective money supply management supports growth.Net Interest Margin: There is a negative relationship, suggesting that narrower interest margins can enhance economic growth. Short-Run Dynamics: Certain variables negatively impact GDP per capita in the short run, while money supply has a positive effect. The adjustment speed towards long-run equilibrium is 16.02%. Granger Causality: GDP per capita Granger-causes financial development, indicating that economic growth influences financial.

13.Recommendation

The study indicates that there is a long-term bi-directional relationship between financial development and economic growth in Ethiopia, suggesting that the government should focus on both areas to enhance their performance. In the short term, most financial development proxies are insignificant, except for broad money supply, which positively impacts economic growth by providing domestic credit that boosts investment and income. Effective monetary policy is essential to manage potential inflation from increased money supply. Additionally, trade openness is

identified as a crucial factor influencing economic growth in both the short and long term, highlighting the importance of facilitating exports and imports. Reducing transaction costs and enhancing domestic credit to the private sector are also key to promoting savings, investment, and employment in Ethiopia.

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