

Impact of Financial Sector Development on Economic Growth: Evidence from Tanzania

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Abstract

Financial sector has always been potential ingredient in bringing growth in an economy, the indirect impact of financial markets and institutions through saving mobilization and credit expansion is of extraordinary importance. By employing Autoregressive Distributed Lags (ARDL) approach impact of financial sector on economic growth of Tanzania is examined. The results show that, in both long-run and short-run, financial development exerts significant but negative effect on economic growth contrary to our expectations. The study employs the ratio of broad money to GDP (financial depth) as a proxy measure of financial development, along with inflation rate, real interest rate, real exchange rate, share on of investment to GDP, proportion of development expenditure to total expenditure and dummy for structural reforms as control variables during our estimations. Results also suggest non-existence of causality between financial development and economic growth. Thus the study suggests strengthening data availability on flow of credit from financial institution to the public is necessary to materialize the effect of financial sector in Tanzania.

Keywords: Financial sector; Economic growth; ARDL model.



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1. Introduction

Truth be told, economic growth is a phenomenon in an economy resulting from complex process through which multiple macro level variables built from individual units interacts. It is the result of war fought by individual households to the aggregate economic actors working under different economic sectors such as agriculture, manufacturing, mining, finance, public administration and international trade (Upreti, 2015). But given the nature and level of the economy, the magnitude impact of each sector and level of importance differs. In some economies such as South East Asian economies manufacturing sector take a lead as driver of economic growth, while in some other countries service sector takes a steering wheel in driving the economy (Ghani and O'Connell, 2014; UNIDO, 2015). Irrespective of which sector lead growth in an economy, vibrant financial sector is always a key ingredient in giving positive stimuli to growth of leading sector itself and channeling its impact to other sectors of economy hence arriving at high levels of output production in an economy (Greenwood and Scharfstein, 2013; Nwosu *et al.*, 2015; Sahay *et al.*, 2015; Sunde, 2012).

For developed nations with sophisticated financial system, the sector serves as a key indicator among other indicators of how well economy is performing (Bist, 2018; Schinasi, 2004). Take example the slow-down in Chinese and Asian economies in end of 2015, it has been easily noticeable through the performance of its financial markets (Cashin *et al.*, 2017). Moreover, the melt-down of global economy in 2008 after the collapse of housing sector in United State, severity of the impact was well felt through financial sector, the collapse of some investment companies like Lehmann Brothers in United State, huge losses made by Mortgage lending companies one of largest Insurance company AIG which resulted to government takeover for a rescuing, the crisis lead to sharpest drop in economic activity of modern era (Bartmann, 2017). Even in developing countries, financial sector has its significant impact on economic growth no matter how rudimental it could be (Allen *et al.*, 2011; Mlachila *et al.*, 2016; Sunde, 2012).

Discussion on importance of the sector can be trace far back since 19 centuries, when Bagehot (1973) and (Schumpeter, 1911) presented their argument that the sector is worth considered in bringing positive economic growth (Arestis, 2005; Balamoune-lutz, 2010). But the sector was not taken very much seriously until 1980s following an international financial crisis of Latin America started in Mexico 1982 after the abruptly ending of capital inflows in 1981-82 (Clement and Maes, 2013). A steady growth in money supply and well manage credit expansion in an economy are the best ways in which financial sector stimulate production and growth of economies.

In a course of sailing towards economic growth and development, Tanzania financial sector has gone through several reforms basing on political ideology embraced by the government and later the suggestions for Britton Wood institutions on Structural Adjustment Programs.

After her independence in 1961 and prior Arusha declaration in 1967, Tanzania experience a liberal type of economy whereby private and public sector co-existed, thus giving room for private financial institutions like commercial banks to operate. It was the period of macroeconomic stability, a country experienced low inflation rate, satisfactory balance of payment and recorded highest average growth rate of 7.8percent 1965-1966 (BOT, 2011).

Era of Ujamaa (socialism) 1967-1985, turned ownership and ways of operation for financial sectors in economy. Major changes in economy were marked by Arusha declaration following political leaders desire to increase the pace of economic growth to fight poverty, ignorance and diseases. Socialism ideology was seen as the best alternative available for a young growing nation to achieve its macroeconomic objectives. During this period of time, government took control of all major means of production, all private owned banks were nationalized to form one National Bank of Commerce, and Central Bank had no control over monetary policy since all operation were under government directives (BOT, 2011; Msami and Wangwe, 2016).

It was during this socialism era when a country experienced the worst economic down turn, characterized with inefficiency production caused by trade and price control by the government, stagnated exports and massive shortage of consumer commodities from import restrictions under the policy of protecting import substitutions industries. Together with series of events such as oil crises of 1974 and 1979, and a war against Uganda in 1979, Tanzania's economy was experience internal and external imbalances, high inflation rate, huge fiscal deficit because government to subsidize basic social services, and average growth rate of economy under this period was 2.9percent (Ndanshau, 2010; Wangwe *et al.*, 2014).

The failure of Nation Economic Survival program in 1981-82 and Structural Adjustment Programme 1982-85 necessitated the embrace of Economic Recovery Program (ERP I) in 1986 under the help of World Bank and International Monetary Fund (Arkadie, 1995; Mwakalobo, 2009). These changes forced the government to liberate the economy allowing the work of market forces. Thus as for financial sector, Nyirabu Commission was formed to evaluate difficulties of the sector and draw the road map to accommodate necessary sectorial reforms. Given the recommendation made by the commission, from 1991 Tanzania financial sector was liberalized, and BOT was relieved from government control giving it a mandate under BOT Act of 1995 to oversee soundness of financial system and pursue single monetary policy goal of price stability (BOT, 2011).

According to Bank of Tanzania report, from first and second generation financial sector reforms in 1991 and 2003 respectively has landed the economy to the point where by for a decade, Tanzanians are enjoying a single digit inflation rate with exception to 2008,2009 and 2011, growth rate of GDP of not less than 6percent, increasing number of banks that provide services from 3 before 1990 to 49 in 2012 (BOT, 2011). Latest statistics provided by Financial survey done in 2013 reported 57percent of individual aged 16 years and above have access to formal financial services from bank branches, ATM, microfinance institute/SACCOS or mobile money agent within the 5 kilometers radius, compared to 32 percent and 16 percent in 2012 and 2009 respectively (FSDT, 2014).

Should the economy be thankfully to financial sector, that it is indeed the sector among other sectors which have stirred growth of Tanzania's economy? This is a million-dollar question answered by this study, by setting a hypothesis that, financial development impact economic growth positively.

2. Methodology

The study employs time series data form 1967-2011 whereby, explanatory variables taken on board to explain economic growth in Tanzania include; inflation rate, real interest rate, real exchange rate, share of investment to GDP, proportion of development expenditure to total expenditure, and dummy variable to capture period of structural adjustment in any economy. Whereas the dependent variable is the ratio of Broad money supply to GDP (financial depth) is taken as proxy measure of financial development as employed by Adu *et al.* (2013). Thus the economic growth function can be expressed as follows;

$$GDP = f(FD, RR, INF, CGA, RER, INV, RFM) \quad (1)$$

And, from the function, the followed regression equation can be modeled;

$$LGDP_t = \beta_0 + \beta_1 M2Y_t + \beta_2 RR_t + \beta_3 INF_t + \beta_4 CGA_t + \beta_5 RER_t + \beta_6 INV_t + \beta_7 RFM_t + e_t \quad (2)$$

Where LGDP is real Gross Domestic product in logarithmic form, M2Y financial depth (measured by ratio of broad money to gross domestic product, a proxy of financial development), RR real interest rate, INF is inflation rate, CGA Central Government Activities which is proportion of development expenditure to total government expenditure, RER is real exchange rate, INV gross capital formation (investment) as share of GDP, and e is disturbance error term.

2.1. Analysis Techniques

2.1.1. Unit Root Testing, Cointegration and Error Correction Model

For the purpose of this study we employ Augmented Dickey-Fuller Unit Root Test (ADF), and Zivot-Andrews Unit Root Test which takes into account structural breaks to check for stationarity of time series variable so as to be able to generalize the result for other time period. The study also employs Bounds testing approach to cointegration

which is popularly known as Autoregressive Distributed Lag (ADRL). The technique was popularized by Pesaran and Shin (1999), Pesaran and Pesaran (1997), and Pesaran *et al.* (2001), (Narayan and Smyth, 2004).

Finally, since cointegration regression takes into account long-run properties only, it is necessary to include short-run dynamics for good time series modelling. Error correction model estimates speed at which a dependent variable returns to its equilibrium state after changes in the independent variables.

An ARDL representation of equation (2) is specified as follows:

$$\Delta LGDP_t = \beta_0 + \beta_1 t + \sum_{i=1}^p \beta_{2i} \Delta LGDP_{t-i} + \sum_{i=1}^p \beta_{3i} \Delta M2Y_{t-i} + \sum_{i=1}^p \beta_{4i} \Delta RRR_{t-i} + \sum_{i=1}^p \beta_{5i} \Delta INF_{t-i} + \sum_{i=1}^p \beta_{6i} \Delta CGA_{t-i} + \sum_{i=1}^p \beta_{7i} \Delta RER_{t-i} + \sum_{i=1}^p \beta_{8i} \Delta INV_{t-i} + \delta_1 \Delta LGDP_{t-1} + \delta_2 \Delta M2Y_{t-1} + \delta_3 \Delta RRR_{t-1} + \delta_4 \Delta INF_{t-1} + \delta_5 \Delta CGA_{t-1} + \delta_6 \Delta RER_{t-1} + \delta_7 \Delta INV_{t-1} + \gamma_1 RFM + \mu_t \tag{3}$$

Where *p* is lag length, Δ is difference operator, and μ_t is error term that is assumed to be serially uncorrelated. The first stage of bound testing is F-test, the null hypothesis in the equation is (H_0 ; $\delta_1=\delta_2=\delta_3=\delta_4=\delta_5=\delta_6=\delta_7=0$) implying nonexistence of long run equilibrium relationship, while alternative is (H_1 ; $\delta_1 \neq \delta_2 \neq \delta_3 \neq \delta_4 \neq \delta_5 \neq \delta_6 \neq \delta_7 \neq 0$).

Two set of critical values are used in comparison with calculated F-statistics value, one set assumes all variables are I(0) this forms lower critical bounds, and second set assumes all variables are I(1) forming upper critical bounds. If calculated F-statistic exceed upper critical bounds value, H_0 is rejected. If calculated F-statistic lies below lower critical bounds value, this imply there is no cointegration, and if calculated F-statistics fall between lower and upper critical bounds value, then the test is inconclusive.

Optimal lag length in the model are selected on basis of Schwarz-Bayesian Criterion (SBC) which is known as parsimonious model because it selects smallest possible lag length.

Existence of long-run equilibrium relationship among variables required an estimation of error correction estimates of ARDL model. Error correction representation of the series is specified as follows:

$$\Delta LGDP_t = \beta_0 + \beta_1 t + \sum_{i=1}^p \beta_{2i} \Delta LGDP_{t-i} + \sum_{i=1}^p \beta_{3i} \Delta M2Y_{t-i} + \sum_{i=1}^p \beta_{4i} \Delta RRR_{t-i} + \sum_{i=1}^p \beta_{5i} \Delta INF_{t-i} + \sum_{i=1}^p \beta_{6i} \Delta CGA_{t-i} + \sum_{i=1}^p \beta_{7i} \Delta RER_{t-i} + \sum_{i=1}^p \beta_{8i} \Delta INV_{t-i} + \gamma_1 RFM + \alpha ECM_{t-1} + v_t \tag{4}$$

Where *ECM* is residual obtained from equation (3), and α is a speed adjustment parameter. The Error correction model results shows speed of adjustment back to long-run equilibrium after short-run shocks.

Diagnostic tests to examine for normality, serial correlation, function form and heteroscedasticity are conducted, together with stability test, these diagnoses help to ensure fitness of the model. Stability test is done by cumulative sum of recursive residuals (CUSUM) and cumulative sum of squares of recursive residuals (CUSUMSQ).

3. Results and Discussion

3.1. Descriptive Analysis and Unit Root Test

The table 1 below present mean, median, maximum, minimum, standard deviation, skewness and kurtosis and normality test. As it is indicated, at 5percent level of significant, the Jarque-Bera test statistics fail to reject the Null hypothesis of normal distribution for all variables, implying that all variables are normally distributed.

Table-1. Descriptive Analysis Results

Estimates	Variables						
	CGA	INF	INV	LGDP	M2Y	RER	RR
Mean	26.902	16.727	0.219	29.662	0.247	776.052	-1.097
Median	27.956	12.900	0.220	29.650	0.235	848.975	0.920
Maximum	46.660	36.100	0.367	30.520	0.419	1408.572	17.180
Minimum	1.280	2.100	0.129	28.739	0.134	210.358	-26.140
Std. Dev.	9.346	11.366	0.053	0.395	0.080	332.097	11.202
Skewness	-0.495	0.299	0.452	-0.002	0.548	-0.037	-0.494
Kurtosis	3.554	1.557	2.869	3.469	2.560	1.641	2.225
Jarque-Bera	2.414	4.572	1.564	0.413	2.619	3.474	2.955
Probability	0.299	0.102	0.457	0.813	0.270	0.176	0.228
Observations	45	45	45	45	45	45	45

Note: CGA= Central Government activities (proportion of development expenditure to total expenditure), INF=inflation rate, INV=investment to GDP ratio, LGDP=real GDP in logarithm form, M2Y=ratio of M2 to GDP, RER=real exchange rate, and RR=real interest rate.

The Augmented Dickey-Fuller test shows all variables are integrated of order one I(1), implying they are stationary after first difference (Table 2). Since we suspect structural breaks following policy changes started in mid-1980, Zivot-Andrews unit root test which takes into consideration structural breaks was employed, it reveals similar results as ADF except for real exchange rate (RER) which is stationary at level.

Table-1. Dick-fuller Unit root test

Variable	At level		At first difference		Order of integration
	Lag length	t-statistic	Lag length	t-statistic	
LGDP	0	-2.463	0	-6.570***	I(1)
M2Y	1	-2.566	0	-5.140***	I(1)
INF	1	-1.813	0	-8.506***	I(1)
RR	0	-2.561	0	-7.980***	I(1)
INV	1	-1.787	0	-4.914***	I(1)
CGA	0	-2.129	0	-7.696***	I(1)
RER	1	-2.866	1	-5.311***	I(1)

Note: The null hypothesis is that, series is non-stationary. The asterisks (***), (**), and (*) represent level of significance at 1%, 5% and 10% respectively. The number in brackets represents order of integration.

Table-2. Zivot-Andrews results for Unit root test

Variable	At level			At first difference		
	t-stat	1%	5%	t-stat	1%	5%
LGDP	-3.723	-5.43	-4.80	-7.137** (1976)	-5.43	-4.80
M2Y	-3.967	-5.43	-4.80	-6.018** (1984)	-5.43	-4.80
INF	-3.739	-5.43	-4.80	-8.929** (1986)	-5.43	-4.80
RR	-4.037	-5.43	-4.80	-8.793** (1985)	-5.43	-4.80
CGA	-3.655	-5.43	-4.80	-8.832** (1997)	-5.43	-4.80
INV	-3.072	-5.43	-4.80	-5.339* (2000)	-5.43	-4.80
RER	-5.932*** (1987)	-5.43	-4.80			

Note: H_0 —there is unit root, and the asterisks (**) and (*) means variable is significant at 1% and 5% respectively.

3.2. Cointegration

Unit root test results from both ADF and Zivot-Andrews support the use of ARDL cointegration model because it variables in the model to be either I(1) or mixture of I(0) and I(1). Since we use annual data with relative small sample size (45), 2 lags length is chosen as suggested by Pesaran and Shin (1999).

Table-3. The Bounds test results

Test statistics	Bound critical values (restricted intercept and trend)		
Calculated F-statistics	Critical values	I(0)	I(1)
9.294***	1%	3.595	5.225
	5%	2.643	4.004
	10%	2.238	3.461

Note: The asterisks (***), (**), and (*) represent level of significance at 1%, 5% and 10% respectively

The calculated F-statistic for the model is 9.294 which is greater than upper critical bound 5.225 at 1% level of significance, implying long-run equilibrium relationship among variables exist.

3.3. Long Run Estimates

Following existence of long-run equilibrium relationship, estimation of long run and short-run parameters is possible. Estimation of ARDL model are based on Schwarz Bayesian Criterion, the order of model is ARDL (1,0,0,0,0,0,2). Table 5 presents long-run regression results.

Table-4. Estimated Long Run Coefficients using the ARDL Approach, ARDL(1,0,0,0,0,0,2) selected based on Schwarz Bayesian Criterion

Dependent variable: LGDP	Coefficient	T-ratio	Probability
M2Y	-1.2212**	-2.1937	0.036
RR	0.00304	0.7752	0.444
INF	0.00756*	1.9283	0.063
CGA	0.00068	0.2469	0.807
RER	0.00011	0.6165	0.542
INV	1.9007***	4.6187	0.000
RFM	-0.66071**	-2.6886	0.011
C	28.85310***	217.3455	0.000
T	0.03808***	9.6402	0.000
Diagnostic Tests		LM Version	F Version
Test Statistics		Probability	Probability
Serial correlation	CHSQ(1)	0.411	0.470

Functional Form	CHSQ(1)	0.333	0.395
Normality	CHSQ(2)	0.448	Not applicable
Heteroscedasticity	CHSQ(1)	0.038	0.039

Note: asterisks (***) (**), and (*) means variable is significant at 1%, 5% and 10% respectively.

From table 5, coefficient of financial development (M2Y) significant at 95% confidence interval, but it bears unexpected negative sign, implying existence of inverse long-run relationship between financial development and economic growth in Tanzania. This inverse relationship may be because financial sector in Tanzania which is largely dominated by banking sector is still limited to less portion of population, whereby only 8 percent of adult Tanzanians have full serviced bank account (FSDT, 2014; InterMedia, 2015). Kouki (2014) cautioned measure of financial development using broad money (M2) in absence of private sector credit data is prone to failure in capturing financial development. This is because this proxy measure is more related to ability of financial sector to provide transaction services rather than the ability to channel funds from savers to borrowers (Kouki, 2014). Thus high ratio of M2 to GDP may a result of holding more money as store of value because of absence of attractive alternative.

Moreover, the study by Adu *et al.* (2013) indicated that using ratio of broad money supply to GDP as proxy of financial development yield significant but negative results, different from when private sector credit to GDP ratio or private sector ratio of total credit are used as proxy measures of GDP.

Coefficients of real interest rate (RR) is insignificant but bears expected positive sign. As it was presented by McKinnon (1973), a rise in real interest rate will attract savings from households, allowing financial intermediaries to accumulate loanable funds to finance investment in the economy. But for the case of Tanzania, large portion of population fail to access financial services whereby 27 percent are completely excluded in both formal and informal financial service, with only 8 percent of adult Tanzanians with full services bank account in banks are urban centered, thus any rise in real interest rate will only attract marginal funds with marginal impact on economy (FSDT, 2014; InterMedia, 2015).

Inflation rate is significant at 10% but it exerts positive impact on growth contrary to our expectation, 1% increase in inflation rate will result to 0.008% rise in economic growth. Though economists agree on problems brought by high inflation rate, still one cannot be certain on relationship between inflation and economic growth; lower or moderate rate of inflation may have positive and significant effect on economic growth.

Proportion of development expenditure to total expenditure (CGA) is insignificant but bears expected positive sign. Insignificance of variable may be justified by lack of commitment of government officials to oversee implementation of expenditure plans as indicated in the budget. Embezzlement of funds has been common problem in most African governments, increase in development expenditure remain on papers, with high possibility of wastage of development funds, failure to realize development goals as indicated in every annual budget is certain.

Coefficient of real exchange rate (RER) is insignificant but with expected positive sign. A devaluation of domestic currency is likely to be significant for an economy whose exports take large portion of GDP, but for the case of Tanzania, since mid-1970s to 2011 a proportion of export to Gross Domestic Product has remained below 20%. Thus it is more likely that effect of an increase in real exchange rate to be unnoticeable on growth.

For the case of Investment (INV), the variable is significant at 1% significant level. A unit increase in ratio of investment to GDP will cause a 1.9% increase in economic growth. And dummy variable to capture structural reform (RFM) is significant at 5% level of significance but it bears negative signs, implying economic reforms which started since 1986 are inversely related to economic growth.

3.4. Short-Run Estimates

The error correction model (ECM) associated with ARDL (1,0,0,0,0,0,2) is presented in table 6 below;

Table-5. Error Correction Representation for the selected ARDL model ARDL(1,0,0,0,0,0,2) selected based on Schwarz Bayesian Criterion

Dependent variable: dLGDP	Coefficient	T-ratio	Probability
dM2Y	-0.8466**	-2.2745	0.030
dRR	0.00211	0.7752	0.460
dINF	0.00524*	1.7678	0.087
dCGA	0.00047	0.2451	0.808
dRER	0.000079	0.6367	0.529
dINV	1.3177***	3.5125	0.000
dRFM	-0.11954	-1.5284	0.136
dRFM(-1)	-0.28172	-2.5910	0.014
dC	28.85310***	5.1406	0.000
dT	0.03808***	4.5018	0.000
Ecm(-1)	-0.6933	-5.1000	0.000
		F-stat(10,32)	9.2938[0.000]
		R ²	0.7499
		DW-statistic	1.9165

Note: asterisks (***) (**), and (*) means variable is significant at 1%, 5% and 10% respectively. Number in bracket is probability value. $ECM = LGDP + 1.2212*M2Y - 0.0030379*RR - 0.0075606*INF - 0.6827E-3*CGA - 0.1146E-3*RER - 1.9007*S + 0.66071*RFM - 28.8531*C - 0.038082*T$

Table 6 above shows that coefficient of lagged error correction term is negative and statistically significant at 1% level, this negative and significant coefficient is another indicator of existence of cointegration among variables. The coefficient of error correction term implies that, 69% of the disequilibria of the previous period's shock adjust back to the long run equilibrium in current year.

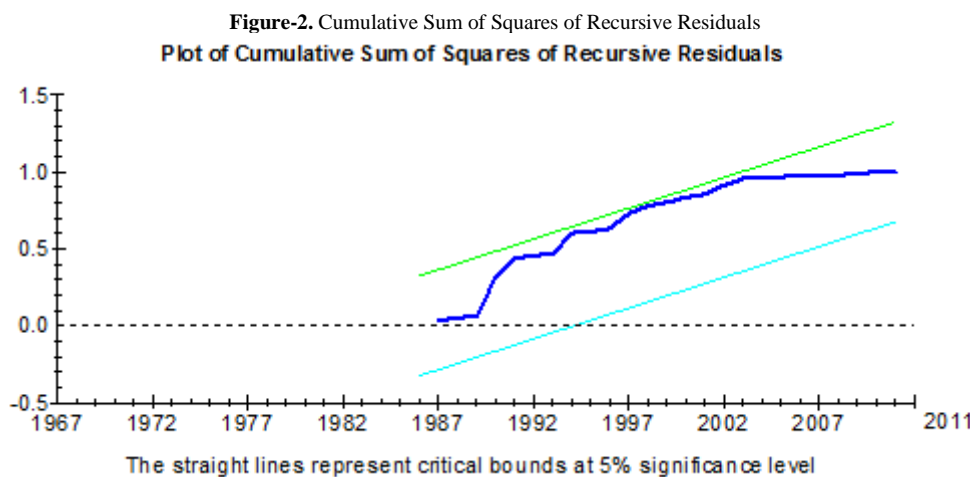
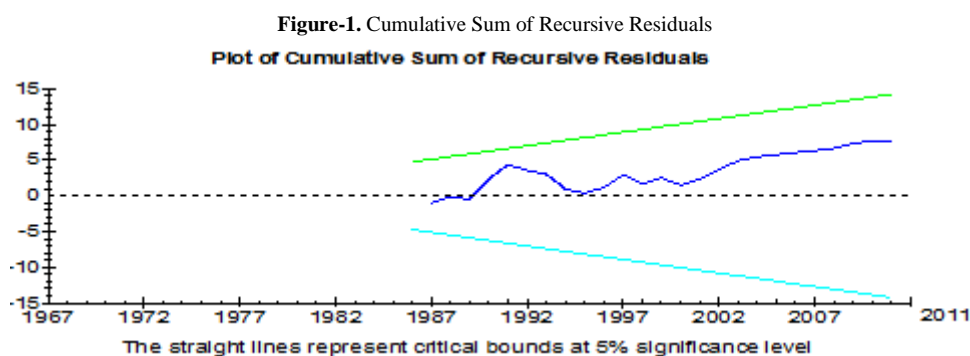
Variables in short-run model reveal similar effect as in long-run, though magnitude of effects of regressors on regressand is slightly smaller compared to those in long-run. Also in short run coefficient of dummy variable (RFM) become insignificant while it's lagged value become significant at 5 percent level and exert negative effect on growth rate.

Financial development is significant at 5 percent and it inversely affect growth rate (dLGDP) in short-run, inflation rate continues to exert positive effect even in short run, 1 percent rise in inflation rate will stimulate economy to grow at 0.005 percent, and investment is also significant in short run causing positive effect on economic growth rate a unit change in investment. Real interest rate (RR), Central government actions (CGA) and real exchange rate (RER) remain insignificant even in short-run.

3.5. Diagnostic Test

Diagnosis tests conducted on estimated ARDL (1,0,0,0,0,0,2) model suggest that, the model does not suffer from serial correction problem, function form misspecification, and normality problem. On the other hand, tests detected heteroscedasticity problem, but as it was suggested by Mbelle (2005), it is natural to detect heteroscedasticity in time series estimated ARDL equation because it has mixed order of integration, such as I(0) and I(1).

On stability test, graphs of cumulative sum of recursive residuals (CUSUM) and cumulative sum of square of recursive residuals (CUSUMSQ), indicate that all coefficients of estimated ARDL error correction model are stable as they fall within the critical bounds.



3.6. Causality Results

Akaike Information Criteria suggests use of 4 lag length, and by using E-views program, results of causality are presented on table 7 below.

Table-6. Pairwise Granger causality test

Null hypothesis	Obs	F-statistics	Probability
Δ LGDP does not Granger Cause Δ M2Y	40	0.38109	0.8204
Δ M2Y does not Granger Cause Δ LGDP		1.64115	0.1889

From table 7, with given 10 percent level of tolerance, causality between financial development and economic growth does not exist for the case of Tanzania, but causality runs from financial development to economic growth hardly at 20 percent level of significance.

3.7. Comparison with Results of Other Studies

The findings of this study can be compared with the following groups of empirical findings: Al-Malkawi *et al.* (2012) on the study “Financial Development and Economic Growth in the UAE: Empirical Assessment Using ARDL Approach to Co-integration”, examined the relationship between financial development and economic growth using time series data from 1974 to 2008 (Al-Malkawi *et al.*, 2012). They found that financial depth (M2/GDP) has significant and negative effect on economic growth, also the results suggested existence of bi-directional causality between two variables. Empirical study by Mohamed (2008) done in Sudan, found coefficient of M3/GDP (indicator of financial development) is negative and significant. He was investigating a relationship between financial development and economic performance in Sudan, and adopted Autoregressive Distributed Lags (ARDL) approach in an analysis (Mohamed, 2008).

In Tanzania, a study undertaken by Mushi (1998) on “The impact of financial development on economic growth in Tanzania” revealed similar findings that; financial development has negative impact on economic growth. According to her results, coefficients of all financial size indicators (overall financial depth indicator and financial intermediation indicator) were statistically significant at 1 percent and 5 percent levels, but bore negative signs. Analysis was done using OLS on time series data from 1966 to 1995, financial size indicator were LLY-ratio of liquid liabilities of the financial system to nominal GDP, and QLLY-the ratio of quasi-liquid liabilities of financial system to nominal GDP (Mushi, 1998).

4. Conclusion and Recommendation

The study has examined the impact of financial sector development on Economic growth; Evidence from Tanzania, by employing Autoregressive Distributed Lags (ARDL) approach. The results show that, in both long-run and short-run, financial development exerts significant but negative effect on economic growth contrary to our expectations. We employ ratio of broad money to GDP (financial depth) as a proxy measure of financial development, along with inflation rate, real interest rate, real exchange rate, share on of investment to GDP, proportion of development expenditure to total expenditure and dummy for structural reforms as control variables during our estimations. Results also suggest non-existence of causality between financial development and economic growth, but causality can be said to run from financial development to economic growth hardly at 20 percent significant level.

Strengthening data availability on flow of credit from financial institution to the public is necessary to materialize the effect of financial sector in Tanzania. This can be done through strengthening the credit reference bureau which will be responsible in keeping records of liquidity flow of funds from different financial institutions to borrowers or investors.

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