ECONOMIC PERFORMANCE IN TANZANIA: ROLE OF INVESTMENTS AND FINANCIAL DEVELOPMENT

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ABSTRACT

The study investigates influence of investments and development of financial sector on performance of economy. Secondary data from the year 1997 to 2020 were used in the analysis. The analysis used bounds test for Autoregressive Distributed Lags (ARDL) Model and Error correction model due to existence of co-integrating equations among variables in the long run. Findings indicate existence of co-integrating equations over the long run between the variables. Error correction term is -1.8080 with significant probability of 0.000 implying almost 1.81 percent of deviations between long run values and short run values are adjusted within a year. Findings also revealed that a percentage change in total deposits is associated with 2.13 percent increase in economic performance on average ceteris peribus at 5 percent level of significance. On the other hand, a percent change in capital formation is associated with 0.55 declines in economic performance on average ceteris peribus at 5 percent level of significance. In short run, financial developments lagged by one and two years are significantly associated with regress in current year financial progress. As far as investment is concern, one year lagged value is associated with progress of current year investment. The study recommends that financial policies of the country should be crafted in a proactive way taking into consideration that previous year's development initiatives in the sector may exhibit negative impact on the current year's initiatives.

Keywords: Economic Performance, Financial Development, Investment.

INTRODUCTION

Economic development of a country can be considered from different aspects including Gross domestic product (GDP). GDP examines the country's outputs and economic growth. It is standardized measure which largely measure total value of output of goods and services of a country over a certain period of time (Case and Fair, 2006). There are other measures that can gauge economic development. For example, Human Development Index which comprises factors such as life expectancy, public expenditure on health as well as on education. HDI involves a combination of social and health indicators with economic measures. Poverty and employment can also be used to gauge economic progress by considering the decline in level of poverty as an indicator of the effective country's economic development policies while low unemployment rate and expansion of the labor market indicate country's healthier economy. There are other factors that are not widely used by researchers in measuring the economic performance though they are closely associated with country's economic performance. Such factors include; infrastructure and connectivity development in the country; innovation and technology; foreign the direct investments (FDIs); environmental sustainability; governance and institutions; and financial inclusions. Furthermore, a separate study by Cervellati et al., (2009) anticipated that advancements in life expectancy facilitate the accumulation of human capital and exert an impact on income generation. As contended in the study by Dhiman, (2018) there are different gauging tools that can be used to measure progress and stability of financial sector.

Total deposit as the percentage of gross domestic product (DEPOGDP) is considered as one of relevant parameters of financial progress as it provides insights and reflect the level of financial intermediated and how the financial services are accessed and can be used in the country. Financial inclusion is also one of the aspects that determine the relevancy of the deposits as percentage of GDP as the measure of the financial development, higher percentage of deposits and investments as well as access to credit which can support the economic growth and fight poverty (Schoofs, 2002). Financial deepening and long-term financing are also key aspects that contribute in the financial development. Financial deepening implies the depth of the financial system whereby a higher ratio indicates more sophistication to GDP indicates high level of financial inclusion which also implies that larger part of the population is taking part in formal banking system. Financial inclusion promotes savings in the sector and wider range of the financial products and services in the economy. However, the study by Rousseau & Wachtel, (2009) added that excessive or too rapid deepening may cause financial system instability by creating inflation or sometimes lead to financial crisis.

Investments measured by gross fixed capital formation include total value of new manufactured assets used in production, such as machinery, equipment, buildings and infrastructure within a period of time. It also takes into consideration change in the value of current assets. From economic point of view, gross fixed capital formation indicates total amount of resources devoted to enhance and expand productive capacity of the country (Ali, 2015). As investment plays pivotal role in deriving economic performance and overall development, gross capital formation indicates important insights into the overall economic health and trajectory of a country. The study is aimed to assess relationship between financial development, investment and economic performance in Tanzania. Specific objectives are:

To investigate the role of bank deposits on the economic performance in Tanzania.
To investigate the role of gross fixed capital formation on economic performance in Tanzania.

Subsequent parts of this paper consist of the following components: Section two comprises literature review while section three consist of methodology involved to acquire and analyze the data. Section four present findings and discussions, which also include benchmarking findings from this study with those of similar previous studies. Conclusion, recommendations as well as implications drawn from study are presented in section five.

LITERATURE REVIEW

Financial sector development contributes to the accumulation of capital and lowers the expenses associated with obtaining external funding for companies. This, in turn, promotes overall economic growth (Bloch et al., 2003). Shan et al., (2001) adopted a Vector Autoregression (VAR) model to test various hypotheses concerning correlation and causal-effect association between financial performance and the dimensions of growth, investment, and productivity. This approach utilized quarterly time-series data encompassing ten OECD countries along with China. The analysis included variance decomposition and impulse response function to investigate the interconnectedness of variables within the VAR framework. Specifically, the study assessed the connection between economic growth and financial development, as indicated by the measure of total credit. The results

indicated limited evidence supporting the notion that financial development directly drives economic growth.

Odeniran and & Udeaja (2010) examined relationship between progress of the financial sector and the economic advancement in Nigeria. The primary goal was to explore different theories about the link between finance and growth by employing Granger causality tests within a VAR (Vector Autoregression) model from 1960 to 2009. The results unveiled bidirectional causal relationship between certain measures of financial development and economic growth. Notably, the study demonstrated that changes in financial development have a causal impact on economic output, holding true even at a high level of statistical significance (1% significance level), except for the specific case of the ratio of broad money to GDP. Sunde (2012) explored the connection between the effectiveness of the financial sector and the progress of the economy in South Africa. The methods employed included cointegration and error correction modeling, along with Granger causality tests. The findings of the investigation indicate that the variables related to the financial sector, alongside control factors like inflation, exchange rate, and real interest rates, collectively derive the variations in economic growth. The outcomes of the Granger causality tests revealed reciprocal association of economic growth and financial development. This suggests that as the economy expands, financial sector tends to expand as well, and vice versa. In Zimbabwe, Ndlovu (2013) used multivariate granger causality to examine association of development of financial sector and economic growth, findings revealed unidirectional causality meaning financial sector development is the result of the institutional performance in financial market. Puatwoe and Piabuo (2017) examined impact of financial development and economic performance in Cameroon using Auto Regressive Distributed Lags (ARDL) techniques. Their findings revealed existence of significant influence of financial development and economic performance.

Adegbite & Ayadi, (2011) employed basic regression analysis to ascertain influence of Foreign Direct Investments (FDIs) on Nigeria's economy. The results unveiled the significant contribution of FDIs to growth. Nevertheless, the researcher emphasized that the influence of FDIs on growth might be constrained by the availability of skilled human resources. The study ultimately inferred that, indeed, FDIs play a vital role in fostering economic progress. Therefore, there's a requirement for increased investment in infrastructure, the establishment of a conducive macroeconomic framework, and a focus on enhancing human capital development to enhance the productivity and influx of FDIs into the nation. Ali, (2015) examined influence of gross fixed capital formation on Pakistan's economy by analyzing time series data from the year 1981 to 2014. Study utilized the Johansen Co-integration and Vector Error Correction Model (VECM) techniques for the investigation. The results indicated a noteworthy effect of fixed capital formation on the economy's growth of Pakistan. Boamah et al., (2018) explored correlation between Financial Depth, Gross Fixed Capital Formation, and Economic Growth across 18 Asian countries. The study used panel data spanning from 1990 to 2017. The results highlighted a substantial influence of gross fixed capital formation and financial depth on enhancement of Economic Growth.

This study is built on Bank-based Theory, the theory advocates that financial intermediation plays a crucial role in reducing information asymmetry between savers and borrowers. Financial intermediaries analyze information about borrowers,

assess creditworthiness, and allocate funds to the most viable investment projects. This process of financial intermediation ensures that capital is efficiently channeled to productive uses, boosting economic performance. Financial Intermediation Theory argues that a well-developed financial system, including a robust banking sector, contributes to economic growth and performance by efficiently mobilizing savings and allocating them to productive investments. Furthermore, it emphasizes the role of financial intermediaries, such as banks, in facilitating the flow of funds from savers to borrowers. There are different researchers who have tried to examine the validity of the financial intermediation theory. For example, Graff, (2002) examined causal connections between financial activity and economic growth across 93 countries. The research discovered evidence suggesting that finance can precede economic growth, even though finally it was concluded that this relationship is not consistently stable.

Shan et al., (2001) investigated relationship between development in financial sector and economic development, the study employed Toda-Yamamoto causality in panel data from 19 OECD countries and China, focusing on indicators like total credit and interest spread. Their findings supported the notion that in one country, the supply of finance leads economic growth. Additionally, Jallian et al., (2001) conducted an empirical investigation on the association between financial development and economic growth across 42 countries, encompassing both developing and developed nations. They utilized bank-deposit money assets as a measure of financial development. Employing a pooled-panel data approach in time series and cross-sectional dimensions within the frameworks of simple ordinary least squares, panel, and two-stage least squares, their finding was consistent with the perspective that financial progress influence healthy economy.

Financial progress characterized by a well-functioning banking system and capital markets, enables increased access to capital and lowers borrowing costs. This implies stimulating investment activities by businesses as well as individuals, leading to higher levels of total investment. As far as long-term Financing, banks are well-suited for providing long-term financing, which is crucial for supporting investment in industries that require substantial capital and have longer gestation periods. Banks also do perform risk Management functions where by banks engage in risk management activities by diversifying their loan portfolios and employing risk assessment techniques. They also have the ability to monitor and control the use of funds, reducing the likelihood of default. Banks play a role in corporate governance by actively monitoring the activities and financial health of the firms they finance. They can influence corporate decision-making and provide valuable advice to improve corporate governance practices (Eveline, 2010).

Odhiambo, (2005) investigated the relationship between economic growth and financial development in Tanzania. The study adopted Johansen-Juselius, (1990) and engages the Johansen-Juselius cointegration approach and the vector error-correction mechanism (VECM). The findings of the study collectively indicate a two-way causal relationship between economic growth and financial development in Tanzania, with a noticeable inclination towards a supply-leading reaction. Kapaya, (2021) investigated connection between economic progress and financial development. This inquiry utilized the Autoregressive Distributed Lag (ARDL) model along with a bound testing procedure, utilizing a time-series dataset spanning from 1980 to 2017. The outcomes of the study indicate that, in the short term, there is a

positive correlation between the depth of the financial progress and improvement in economic health. Interestingly, financial system liquidity and efficiency exhibit a notably strong negative relationship with economic growth in the short and long run. Moreover, the study establishes existence of cointegration between financial development and economic progress.

Hyera & Mutasa, (2016) investigates the causal association between the progress in financial sector and advancement of economy in Tanzania, time series data spanning from 1980 to 2012 was used. Vector Error Correction Model (VECM) was engaged to examine both short-term and long-term causal effect. Additionally, a pairwise Granger causality test was utilized to determine the direction of causation. The results unveiled the existence of a prolonged connection between financial development and economic growth. Moreover, the Granger causality test indicated that in the short term, economic growth triggers financial progress when considering indicators like the ratio of broad money to nominal GDP and the proportion of liquidity liability to nominal GDP. However, when the ratio of credit to the private sector to nominal GDP was assessed, the findings confirmed bidirectional causality between financial development and economic growth, both in the short and long term. Furthermore, the analysis revealed that the financial sector primarily contributes to promoting economic growth in the short run, with the economic growth variable demonstrating a more significant exogenous leading role than other variables. This implies that impact of the financial sector on driving economic growth in Tanzania is somewhat limited. Lastly, the avenue of capital accumulation for gross domestic investments to nominal GDP connects financial progress and growth of economy, but predominantly in the short run. This suggests that the underdeveloped long-term financial infrastructure necessary for effectively fostering investments and driving sustained economic growth continues to be a challenge in Tanzania.

METHODOLOGY

Data were extracted from World Bank Development Indicators database (https://databank.worldbank.org/source/world-development-indicators) covering the year 1997 to 2020 were used to measure the relationship between dependent and independent variables. Gross Domestic Product per capita growth (GDPPCG) (dependent variable) was employed as measure of economic development per capita, while bank deposits as percentage of gross domestic product (DEPOGDP) and gross fixed capital formation (GFCF) were used as independent variables. Other variables such as foreign direct investment inflow (FDI), population growth rate (PLNG) and inflation rate (INFLR) were used as controlling variables. Functional relationship between the variables can be explained by the mathematical model below:

GDPPCG = f (DEPOGDP, GFCF, FDII, PLNG, INFLR) (1)

In equation 1, Gross Domestic Product per capital growth (GDPPCG) is employed as the proxy of economic performance expressed as a function of gross fixed capital formation (GFCF); deposits as percentage of gross domestic product (DEPOGDP); foreign direct investment inflows (FDII); population growth (PLNG) and inflation rate (INFLR)). The study employs GFCF as proxy of investments while DEPOGDP was used as proxy of financial development. The remaining variables (FDII, PLNG and INFLR) were used as control variables. It is very essential to note that total deposits as a percentage of GDP is just one of many indicators used to assess financial progress. This study opted to use total deposits as a percentage of

GDP as a measure of financial development and gross fixed capita formation as the measure of investment due to availability of data.

Generally, before specifying existing econometric relationship between variables, we were compelled to run data diagnostic tests to come up with most appropriate model for this study. Normality tests of variables by using skewness/kurtosis test (SK test) were performed and result was confirmed by using kernel density graph. We decided to use Skewness-Kurtosis test because assess the shape of the distribution in time series data and identify deviations from normality. In testing normality, we develop the null hypothesis (Ho): the time series follow normal distribution, against alternative hypothesis (H1): time series data do not follow normal distribution. We therefore compare the test statistic to the critical value (p=0.05): If the test statistic is greater than the critical value, we reject null hypothesis (normality), indicating that the time series data is not normally distributed. When analyzing time series data, it is important to consider that though normality seems to be common assumption in a lot of statistical methods, not all time series analysis methods require normality test. This is due to the fact that some models, like those underlying robust statistics or non-parametric approaches, are specifically designed to accommodate data that do not follow normal distribution. Generally, it is still very important to assess and consider the normality assumption when performing the analysis of time series data to ensure validity and reliability of statistical analysis.

Multicollinearity Test

Prior to examining the stationarity of variables, it is important to note that variables follow a time series structure and determine if independent variables exhibit multicollinearity using correlation analysis. Given the fact that this study incorporates multivariate time series data with six variables, we conducted tests to assess the presence of multicollinearity. Multicollinearity can lead to problem when fitting the model or interpreting the results. To evaluate the extent of multicollinearity among the independent variables, we performed a correlation analysis. If the correlations among the variables is less than 80 percent it implies that there is no serious correlation among the variables, we further confirm the result using VIF test.

Unit Root Test

Existing literature suggests various methods that exist for testing the stationarity of variables, with the Augmented Dickey-Fuller and Philip Perron tests being the most commonly employed techniques (Dickey & Fuller, 1979). Hence, this research employed the Augmented Dickey-Fuller test to assess the stationarity of the variables, with confirmation from the Phillips-Perron test. The rule is that, if absolute value of the test statistics falls below the 5 percent critical value, it indicates a lack of stationarity, and vice versa. If the result of test revealed that variables are stationary at level, it implies variables are integrated of order zero I(0) while of if the result indicate that none of the variables exhibited stationarity at the initial level it is necessary to apply differencing to attain stationarity. If all variables are stationary after first difference, it implies that they are integrated of order one I(1) and then it is important to perform Johansen co-integration test to test existence of cointegrating equations. If the variables are cointegrated at mixed level (mixed order) bounds test for cointegration is performed to test existence of long run relationship (Pesaran et al., 2001). We test null hypothesis that (Ho): There is no cointegrating equations, against the alternative hypothesis (H1): Ho is not true. To comply with requirement of

the model, we use the log transformation form of the variables and perform the test while the variables are at level and fist difference. Decision criteria can be made at 10%, 5% or 1% level of significance. Result of the test may exhibit calculated F-statistics greater than critical value of upper bound I(1) implying existence of the long run relationships, we reject null hypothesis and use error correction model (ECM) to estimate long run to estimate long run relationship. Alternatively, if calculated F-statistics is less than critical value of the lower bound I(0) implying no long run relationships, we cannot reject null hypothesis therefore we estimate short run relationships using Autoregressive Distributed Lags (ARDL) model. An Error Correction Model (ECM) is used to estimate short-run and long-run relationships between variables that are cointegrated corrects for any short run disequilibrium and adjusting it towards long-run equilibrium. Let's formulate the (error correction model (ECM) with a focus on GDPPCG, DEPOGDP, and GFCF. Firstly, we assume a long-run relationship among the variables, which can be expressed as:

LnGDPPCGt = β0 + β1LnDEPOGDPt + β2LnGFCFt + β3LnFDIIt + β4LnPLNGt +β5LnINFLRt + μt(2)

Where is the error term, which represents the disequilibrium from the long-run relationships? Dependent variable is GDPPCG (GDP per capita growth), and the independent variables are DEPOGDP (Deposit to GDP ratio), GFCF (Gross Fixed Capital Formation), FDII (Foreign Direct Investment Inflows), PLNG (Population Growth), and INFLR (Inflation Rate).

$$\Delta LnGDPPCGt = \boldsymbol{\alpha 0} + \sum \boldsymbol{\alpha} 1\ p\ i{=}1\ \Delta LnDEPOGDPt{-}i + \sum \boldsymbol{\alpha} 2\ p\ i{=}1\ \Delta LnGFCFt{-}i + \sum \boldsymbol{\alpha} 3\ p\ i{=}1\ \Delta LnFDIIt{-}i + \sum \boldsymbol{\alpha} 4\ p\ i{=}1\ \Delta LnPLNGt{-}i + \sum \boldsymbol{\alpha} 5\ p\ i{=}1\ \Delta LnINFLRt{-}i + \lambda 1 ECTt{-}1 + \mu 1 t \quad (3)$$

Where, Δ represents the first difference (short-term change) of the variables, and ECt−1 is the error correction term derived from the long-run relationship.

RESULTS AND DISCUSSIONS

The results indicated that one of the variables, namely Gross Domestic Product Per capital Growth (GDDPPG), was normally distributed while the remaining variables Gross Fixed Capital Formation (GFCF), deposits as percentage of gross domestic product (GDEPOGDP), population growth rate (PLNG) and Foreign direct investments (FDII) did not follow normal distribution since they exhibit joint probability statistics results which is greater than 0.05 percent, hence we failed to reject the null hypothesis that variables are not normally. The study used the Skewness test to determine whether the variables were normally distributed or not, findings based on the joint probability revealed that all variables did not follow normal distribution except the gross domestic product per capita growth (GDPPCG) which measures the economic performance. GDPPCG show test statistics of 0.0292 which was less than the critical value of p=0.05, therefore we failed to reject the null hypothesis that the variable does not follows normal distribution. The remaining variables (all independent depicts test statistics greater than critical value of p=0.05. to normalize the data the variables were subjected to natural logarithm and the SK test was conducted again to confirm the normality after normalization.

Multicollinearity among the Variables

To assess the presence of multicollinearity among the independent variables, a correlation analysis was employed. The findings revealed no significant correlation, as the correlations between variables were all below 0.80. This adherence to the general rule of thumb suggests there is no substantial correlation between any set of the variables (Table 1).

Table 1. Matrix of Correlations Results

Variables	(1)	(2)	(3)	(4)	(5)	(6)
(1) GDPPCG	1.000					
(2) lnFDII	0.445	1.000				
(3) lnPLNG	0.042	-0.197	1.000			
(4) lnINFLR	-0.070	0.314	-0.525	1.000		
(5) lnGFCF	-0.072	-0.148	0.769	-0.348	1.000	
(6) lnDEPOGDP	0.303	0.199	0.327	0.024	0.686	1.000

Result for correlation coefficient shown in Table 2 measures direction of relationship between variables. For example, considering variables of interest (GDPPCG, lnGFCF and lnDEPOGDP), there is positive relationship between economic development and financial development while that of economic growth and Investment is negative, which implies that economic performance improves as the financial sector progress. Practically, this is possible during the short run as in most cases the impact of the investments on the economic performance is expected to be seen in the long run and not in the short run. The results indicated no significant multicollinearity, as none of the variable pairs exhibited a correlation above 80%.

Unit Root Tests

The study used Dickey Fuller test to check for stationarity of variables and then confirm result using Philips Perron test. Table 2 indicates result for stationary test at level and after first difference. Table 3 indicates result for stationary test (as per Phillip Perron unit root test) at level and after first difference. In either case if absolute value of test statistics is greater than critical value at 5 % level of significance then the variable is said to be stationary at level (meaning that we failed to reject the null hypothesis, Ho: there is no unit root), while if absolute value of test statistics is less than critical value at 5 % level of significance then the variable is said to be non-stationary, which necessitate performance of first difference to make the variable stationary (meaning we reject the null hypothesis. Ho: there is no unit root).

Table 2. Dickey Fuller Unit Root Test

Variable	At Level		First Difference	
	Test statistic	5% critical value	Test statistic	5% critical value
lnGDPPCG	-3.201*	-3.000	-	-
lnFDII	-2.571	-3.000	-7.260*	-3.000
lnPLNG	-3.484*	-3.000	-	-
lnINFLNR	-2.057	-3.000	-4.786*	-3.000
lnGFC	-1.929	-3.000	-9.223*	-3.000
lnDEPOGDP	-1.224	-3.000	-5.714*	-3.000

Implies that null hypothesis is rejected in favor of alternative that there is a unit root at 5% level of significance. To confirm the results obtained by running the Dickey Fuller test, we were compelled to carry out the Philips Perron test for unit root and the result is presented in Table 3.

Table 3. Philips Peron Unit Root Test

Variable	At Level		First Difference	
	Test statistic	5% critical value	Test statistic	5% critical value
lnGDPPCG	-3.119*	-3.000	-	-
lnFDII	-2.513	-3.000	-7.451*	-3.000
lnPLNG	-3.270*	-3.000	-	-
lnINFLNR	-2.053	-3.000	-4.843*	-3.000
lnGFC	-2.025	-3.000	-8.673*	-3.000
lnDEPOGDP	-1.336	-3.000	-6.007*	-3.000

Implies that the null hypothesis is rejected in favor of alternative that there is a unit root at 5% level of significance. Result from both dickey fuller and Phillips Perron test (Table 2&3) revealed that only two variables (lnGDPPCG and lnPLNG) were stationary at level I (0). From both tests we can see that the four variables (lnFDII, lnPLNG, lnGFC and lnDEPGDP) were not stationery at level and they become stationery after the first difference I (1). Since there are mixed results, it implies the series are integrated of different orders. However, it is still necessary to run bounds test for cointegration to test existence of long run relationship between the variables as proposed by (Pesaran et al., 2001).

Results for ARDL Bounds test

We test null hypothesis that (Ho): There is no cointegrating equations, against the alternative hypothesis (H1): Ho is not true. To comply with requirement of the model, we use log transformation form of variables and perform the test while the variables are at level and fist difference. Decision criteria can be made at 10%, 5% or 1% level of significance. The result of the test may exhibit calculated F- statistics greater than critical value of the upper bound I(1) implying existence of the long run relationships, in this case we reject the null hypothesis and estimate the long run model (Error Correction Model). Alternatively, calculated F- statistics less than critical value of the lower bound I(0) implying no long run relationships, in this case we cannot reject the null hypothesis therefore we estimate short run relationships using Autoregressive Distributed Lags (ARDL) model. Lastly, if the F-statistics falls between the lower bound I(0) and upper bound I(1), the test is considered inconclusive. Findings revealed that F-statistics =16.896 is greater than critical value of the upper bound I(1) at all three levels which implies that there is long run relationships between the variables which indicate that the series are related and can be combined in linear fashion and even if there are shocks in the short run, which may affect the movement of individual series, they would converge with time in the long run. Therefore, because the series are cointegrated we can estimate both the long run and short run models and the appropriate estimation techniques are autoregressive distributed lags (ARDL) and error correction model (ECM). Selection of optimal lag based on the AIC indicate that the optimal lag is 2 while the optimal lags for each variable for ARDL are (2, 1, 0, 1, 1).

Error Correction Model (ECM)

Error Correction model (ECM) directly estimate the speed at which a dependent variable returns to equilibrium after a change in other variables. ECM possess several advantages such as providing a convenient way to measure and correct deviations from equilibrium in the previous period, which carrying significant economic implications. When cointegration exists, Error Correction model is organized using first differences, which obviously remove trends from the engaged

variables and solving the issues of spurious regressions. The model can also integrate into general or specific approach for econometric modeling. This approach aims to find the most concise ECM model that best suits the available data. It is also argued that the error term representing disequilibrium is a stationary variable, as per the definition of cointegration. This has notable meaning where by cointegration of the two variables advocates' sense of adjustment process that avoid errors in the long-run relationship from escalating indefinitely.

Findings presented in Table 4, revealed that coefficient of error correction terms (negative sign) indicates existence of the adjustment mechanism with -1.808817 percent adjustment speed at which dependent variables adjust towards its long run equilibrium relationship with independent variable after shock. Since the lagged value of Error Correction Term (ECT) is significant it shows how the past year's deviations from the equilibrium affect the current year adjustment at 5 percent level of significance. Findings also indicate that the model was good since adjusted R-square is 89.1 percent indicating the 89.1 % of dependent variable is predictable using independent variables.

Table 4. Result for ARDL and Error Correction Model

D.lnGDPPCG	Coef.	Std.Err.	t	P>t	[95%Conf.	Interval]
ADJ						
lnGDPPCG						
L1.	-1.809	0.222	-8.160	0.000	-2.320	-1.297
LR						
lnFDII	0.146	0.129	1.130	0.290	-0.151	0.444
lnPLNG	0.033	0.331	0.100	0.924	-0.731	0.796
lnINFLR	-0.671	0.136	-4.940	0.001	-0.984	-0.357
lnGFCF	-0.550	0.079	-7.000	0.000	-0.731	-0.368
lnDEPOGDP	2.125	0.226	9.410	0.000	1.604	2.646
SR						
lnGDPPCG						
LD.	0.207	0.127	1.630	0.142	-0.086	0.501
lnFDII						
D1.	-0.331	0.153	-2.160	0.063	-0.684	0.023
lnINFLR						
D1.	0.641	0.178	3.600	0.007	0.231	1.051
lnGFCF						
D1.	1.250	0.400	3.130	0.014	0.328	2.173
lnDEPOGDP						
D1.	-2.342	0.735	-3.180	0.013	-4.038	-0.646
LD.	-2.072	0.533	-3.890	0.005	-3.302	-0.842
_cons	16.458	4.516	3.640	0.007	6.044	26.871

Finding also revealed that foreign direct investments inflows (FDII) and population growth (PLNG) is associated with increase in economic performance, even though the association is not significant at 5 percent level of significance. Findings also revealed that a percentage change in inflation is associated with 0.67077 percent regress in economic performance on average Ceteris paribus at 5 percent level of significance. On the other hand, a percentage change in Gross fixed capital formation (GFCF) is associated with 0.549622 percent decline in economic

performance on average Ceteris paribus at 5 percent level of significance while a percentage change in DEPGDP is associated with 2.1250 percent increase in economic performance on average Ceteris paribus at 5 percent level of significance. In the short run, lag of differenced economic performance value (GDPPCG) has insignificant positive relationships with current economic performance while previous years value foreign direct investment inflows (FDII) have insignificant negative relationships with current economic performance. Previous years value of inflation rate (INFLR) has significant impact on current economic performance at 5 percent level. A percentage change in previous years value inflation rate is associated with 0.64101 increase in current economic performance on average ceteris paribus at 5 percent significance level.

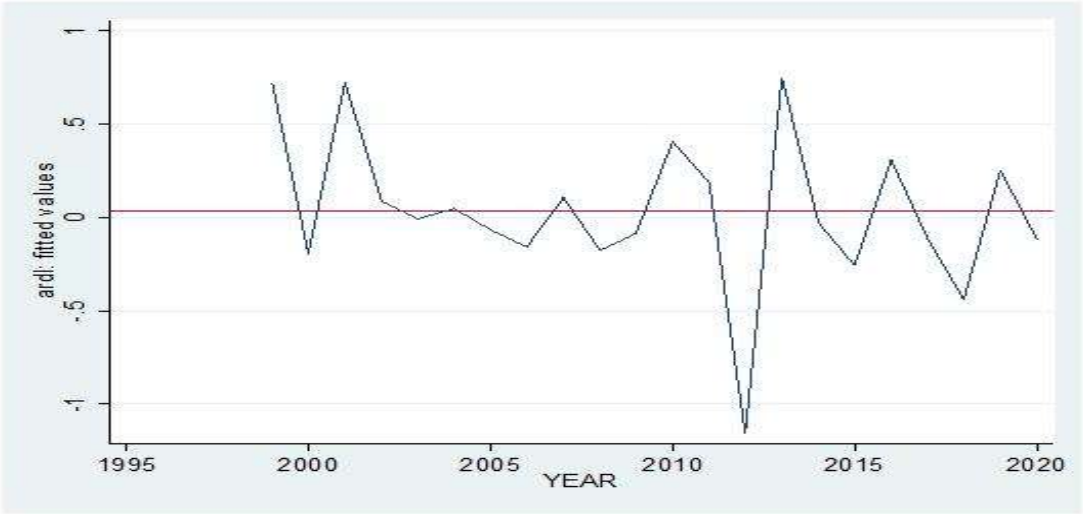
Previous years value of gross fixed capital formation (GFCF) as proxy of investment has significant positive impact on current economic performance at 5 percent significance level. A percentage change in differenced gross fixed capital formation is associated with 1.2502 percent increase in current economic performance on average ceteris paribus at 5 percent significance level. Previous years value of deposits as percentage of Gross domestic product (DEPOGDP) have significant negative impact on current economic performance at 5 percent significance level. A percentage change in deposits as percentage of Gross domestic product is associated with 2.342417 percent decline in current economic performance on average ceteris paribus at 5 percent significance level. While a percentage change in lagged value of deposits as percentage of Gross domestic product is associated with 2.072058 percent decline in current economic performance on average ceteris paribus at 5 percent significance level. Considering the key variables of interest in the long run financial development (growth of the financial sector in Tanzania) has positive relationship with economic performance while in the short run financial development exhibit dynamics where by differenced and lag of differenced value of financial development is associated with negative impact on the economic performance. The result conforms with findings from the study by Mohsin et al., (2003), where selected literatures were reviewed and new evidence were discussed regarding the relationship between role of financial market in fostering economic growth. Result from this study also conforms with findings in the study by Hassan et al., (2011) where the relationship between the financial development and economic performance were examined in middle income countries. Their findings revealed positive relationship between financial development and economic growth in developing countries. It was further contended that financial sector progress is necessary condition but not sufficient conditions for steady economic growth. As far investment is concerned, it implies that in the long run investment portrays negative relationship with economic performance. Probably this is because long term investments do require substantial number of resources and which may be difficult and require time to rise in developing countries like Tanzania. Therefore, implementation of such investments may take time and sometimes remain unfinished for long time this may affect the economic progress in the long run. While in the short run differenced value of assets is associated with positive impact of economic development.

Diagnostic Test

We performed different test to check robustness of the result based on the model used. For example, we tested for normality of the residual using SK test and

as well as Shappiro Wilk test, result revealed that residual we failed to reject the null hypothesis that residual is normally distributed since P=0.0824, the result was confirmed by Shappiro Wilk test where provide the P= 0.05839. As far as stationarity is concerned Dickey Fuller unit root test provided that the absolute value of test statistics -7.297 is greater than -3.000 (therefore we failed to reject the null hypothesis that there is no unit root), this can be confirmed by figure 1 which indicate constant mean. In order to make sure that there is no serial correlation, we tested white noise test using Portmanteau test for white noise which exhibit P=10.9% therefore we failed to reject the null hypothesis that residual is white noise.

Figure 1: Mean of the residual variable



Therefore, given the properties of the residual as confirmed by different diagnostic tests (residual has no serial correlation, stationary, random, normally distributed and has no serial correlation), it is evident that the model used is stable and appropriate and therefore, the robustness of the result is confirmed.

CONCLUSION, POLICY IMPLICATIONS AND RECOMMENDATIONS

The study aims at exploring the role of financial development and investments on the economic performance. Findings reports existence of positive influence of financial development and economic performance in the long run. This implies that Tanzania financial policies should be focus on long-term sustainability and steadiness of the financial sector instead short-term gains. Policymakers are urged to adopt and remain persistent with financial reforms, since the outcome pursued reforms in financial sector to economic performance will be evidently realized over time. Though the relationship in the long run is positive, the study recommends continuously monitor and evaluate the impact of financial sector development on economic growth by employing data-driven approaches to examine the effectiveness of financial policies and make necessary adjustments to maximize the outcomes. Findings also indicate short-run negative relationship between financial sector development and economic performance, this suggest that initial stages of financial sector development might cause disruptions or inefficiencies in the financial system that might slow down economic growth. This implies a need for careful management of any transition phase in the financial sector, such as monitoring and controlling any potential negative impact on economic performance. As the result of short-term dynamics and impacts the study recommends gradual reforms which will allow time for adjustment and to reduce potential adverse short-term effects. This includes

phasing out restrictive regulations and gradually bringing in new financial products and services.

To ensure stability against short-run negative impacts, the study recommend that regulator of the financial sector in Tanzania should ensure there is robust financial regulations and supervision. It is obvious that by strengthening regulatory frameworks it is possible to manage risks and prevent instability in the financial sector, hence minimize adverse short-term impacts on the economy. The study also recommends to regulator to ensure access to finance for businesses, especially small and medium-sized enterprises (SMEs), this can help to absorb short-run negative impacts caused by reforms by ensuring that credit and financial services are available to sectors that drive economic growth. As far as investment is concerned result indicate positive short-run relationship suggests that investments can provide immediate positive impact to economic performance by stimulating aggregate demand, encourage production, creating jobs, and expand productive capacity, this calls for the potential effectiveness of investment-driven economic policies for short-term economic spur. Therefore, the study recommends to authority responsible for investments in Tanzania to focus on attracting and promoting investments that are high in quality, sustainable, and aligned with the country's long-term development goals which may bring immediate outcome. Emphasize sectors with high potential for productivity gains, innovation, and economic diversification. Improve investment planning, management, and oversight to ensure that projects are effectively executed and deliver the expected economic benefits. This includes establishing clear criteria for investment approval, rigorous project evaluation, and continuous monitoring and assessment of outcomes. As far as long-term impact of investments is concerned, result indicate that long-term negative relationship suggests that while investments may initially drive economic performance, overtime they could be experience diminishing returns or even hinder economic performance. This could be due to factors such as over-investment in low-productivity sectors, poor investment quality, resource misallocation, or infrastructure bottlenecks. This study recommends the need for complementary reforms in other areas, such as governance, education, infrastructure, and technology, to support and sustain the benefits of investments in the long run.

Abbreviations (Nomenclature)

GDPPCG:	Gross domestic product per capita growth (%)
DEPOGDP:	Deposits as percentage of Gross domestic product (as %GDP)
GFCR:	GFCR: represents gross fixed capital formation (in UDSD)
FDII:	FDII: represents foreign direct investments inflows (as %of GDP)
PLNG:	Population growth (%)
INFLR	Inflation rate (%)

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