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Financial liberalization and economic growth in selected lower-middle income and upper-middle income countries of Africa, 1986 – 2017

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Abstract
Studies have shown that income level is key to the success of financial liberalization and in line with this we investigated the impact of financial liberalization on economic growth between upper middle income countries and lower middle income countries in Africa from 1986 – 2017. Secondary data were obtained from the World Bank data catalog and other journals. The study employed the Im, Pesaran and Shin (IPS) panel unit root to explore the stochastic properties of each series in the model and the Pool Mean Group (PMG)/Auto-Regressive Distributed Lag (ARDL) estimation for dynamic panel analysis and found that financial liberalization has had positive and significant effect on economic growth in upper-middle and lower-middle income countries. The study conclude that financial reforms enhance economic growth and thus recommend that more rational financial liberalization policies should be pursued by these countries so as to boost investors' confidence for them to bring in the much needed capital required for investment which ultimately would translate to more growths in their economies; proper sequencing of financial reforms and these reforms should be designed in line with needs of an economy, among others.

Keywords: financial liberalization, lower-middle income, upper-middle income

1. Introduction

The financial system is a complex whole of various institutions, and operators that interact within an economy to provide financial services. Such services may include: resources mobilization and allocation, financial intermediation and the facilitation of foreign exchange transactions to enhance international trade (Ajie, Akekere and Ewubare, 2008) [8].

The role of financial system in the growth of an economy cannot be overemphasized. The benefits derivable from a strong and well developed financial system includes: providing /facilitating fast and reliable payment system, mobilizing savings from surplus-spending units and channelling same to deficit-spending units in form of loans, advances, investments, among others. Furthermore, the financial system is the fulcrum of monetary policy implementation and help in diversifying risks by supplying a wide array of financial assets with varying features. For instance, insurance firms provide protection against risk and the stock market hedge against risk.

The role of the financial system as a determinant of economic growth according to Gurley, Mckinnon and Shaw remains inconclusive. It is believed by some scholars that the introduction of financial liberalization policies will bring about the desired connection between economic growth and the financial system has not been sustained in reality. Major international agencies such as World Bank and International Monetary Fund advocated for economic reforms which include liberalization of financial sector by those economies whose financial sector were either to repress to augment higher saving, investment and rapid economic growth.

Nigeria like several developing countries has implemented financial liberalization policies under different financial structures and macroeconomic conditions. For instance, Nigeria liberalized her financial sector as part of the Structural Adjustment Programme (SAP) adopted in 1986. Ghana launched and implemented the Financial Sector Adjustment Programme (FINSAP) in 1988 which was part of a comprehensive Economic Reform Programme (ERP) of the World Bank and International Monetary Fund (See Adu, Marbuah and Mensah, 2013). South Africa gradually adopted and implemented financial liberalization policies which started with the removal of interest and credit controls in the 1980_s and later relaxed exchange controls on non-residents as well as households (Precious, Bahle and Praise, 2014). Morroco and Algeria also liberalized their economies at various times and Tunisia as part of a general Structural Adjustment Programme adopted in 1986 liberalized its financial system.

Prior to the introduction of financial liberalization policies, most financial systems in African countries were characterized with government administered interest rate, heavy government presence, strong regulation, pegging of domestic currencies against foreign currencies and restriction on capital movements often referred to as financial repression. These measures according to proponents of financial liberalization fostered distortions and inefficiencies resulting to low saving mobilization, low investment and over-valuation of the domestic currency that affected their economy adversely.

The adoption of financial liberalization policies as part of major economic reforms were meant to eliminate credit controls, deregulate interest rates, remove entry and exit restrictions in and out of the financial service subsector by operators, encourage free capital movements, develop equity market, encourage prudential regulation and supervision, etc. Financial liberalization policies in many developing countries took various forms and varied in speed and depth but had similar objectives and instruments. Key objectives of the reform in most developing countries were

to reduce direct government intervention and strengthen the role of market forces in the allocation of financial resources, improve the capacity of financial institutions to mobilize domestic savings, enhance effectiveness of monetary policy instruments, promote competition among banks and strengthen their financial soundness (IMF, 1997) [1].

Following the seminal work of Mckinnon (1973) [29] and Shaw (1973), the ideals of financial liberalization has gained wide acceptance.

Efforts have been made by many countries to either liberalize their financial sector fully or partially at different points in time by deregulating interest rate, relaxing selective credit controls, removing restrictions to international capital movements, relaxing barrier of entry and exit of the financial sector, pursuing direct monetary policies among others. As demonstrated by Mckinnon and Shaw that the removal of financial repression policies would encourage saving mobilization which will spur investment and ultimately bring about economic growth. In line with this, many countries made attempt to liberalize their financial sector. However, countries that embarked on financial liberalization have had mixed experiences. Available literature shows divergent views both theoretically and empirically on the implication of financial liberalization and growth.

There are arguments for and against the financial liberalization and economic growth debate. For instance, Levine (1997); Levine and Zervos (1998); Mishkin (2001); Okpara (2010); Mwanga and Sanday (2013) [31] just to mention a few found supporting evidence for Mckinnon and Shaw hypothesis while studies such as Eichengreen and Leblang (2003); Barshir and Khan (2007); Adeoye (2007); Bakare (2011) found evidence that could not support Mckinnon and Shaw hypothesis. Thus, the financial liberalization-economic growth debate is far from been foreclosed.

The absence of consensus both in empirical and theoretical literature concerning financial liberalization and growth, there is need to further explore this relationship. This study intends contributing to the existing body of literature by exploring the relationship between financial liberalization and economic growth in some selected African countries. The specific objectives are to investigate the relationship between financial liberalization and economic growth for lower-middle income countries and upper-middle income countries and examine the effect of financial liberalization on economic growth in upper-middle income countries and lower-middle income countries.

This study identified eight countries in Africa that were categorized along income level and geographical regions in line with the World Bank classifications.

Studies have shown that income level of a country matters to the success of financial liberalization policy on enhancing saving and investment and ultimately growth (Greenwood and Jovanovic, 1990; Akinsola and Odhiambo 2017) [22, 9].

The World Bank classified countries based on income level and region. Based on income level, countries are classified into low income, middle income and high income. The middle income group is further divided into: lower-middle income and upper-middle income. Using region, countries in Africa are classified into two main regions – Sub-Saharan Africa and Middle East/North Africa. Eight countries that fit into this classification shall be selected. The countries selected are: South Africa, Botswana, Nigeria, Tunisia, Ghana, Libya, Algeria and Morroco. South Africa, Botswana, Ghana and Nigeria represent the sub-saharan African bloc while Algeria, Morroco, Libya and Tunisia represent the Middle East/North African bloc. Based on income levels, South Africa, Botswana and Algeria and Libya represent upper-middle income countries. That is, countries with Gross National Income (GNI) per capita between 3,896 and 12,055 United States dollars. While Nigeria, Ghana, Tunisia and Morroco represent lower-middle income countries with Gross National Income between income brackets of 996 and 3,895 United States dollars according to World Bank (2018).

The rest of the study is subdivided into literature review; method of study; results and discussion; and conclusion and recommendations.

2. Literature review

2.1 Review theoretical literature

McKinnon (1973) [29] and Shaw (1973) made us to understand that developing countries operate repressed financial markets that discourages savings, retards the efficient allocation of resources, increases the segmentation of financial markets and creates financial disintegration in the banking system (Khan and Hasan, 1998). They argued that policies of low administered interest rates, selected credit controls, among others lead to financial repression. To get the best out of the financial system such as increased saving mobilization, improve efficiency with resource allocation and stimulating growth, McKinnon and Shaw advocated for the implementation of financial liberalization policies. Particularly, McKinnon (1973) [29] explanation of what is obtainable in developing countries was anchored on two key assumptions. First, investors are constrained by limited external finance and have to depend on self-finance. Second, because of the huge amount needed for investment, investors are expected to accumulate money balances before embarking on expensive but indivisible investments. Shaw (1973) on his part focused on efficient financial intermediation. According to him, financial intermediaries promote investment and raise output growth. He argued that higher deposit rates will increase financial savings and expand the role of financial institutions in channelling funds from surplus to deficit units in the economy. Financial sector development will create the incentive to save which will raise the volume and efficiency of investment and accelerate economic growth.

The thrust of financial liberalization is to build more robust and deeper financial system which can support the growth of private sector enterprises. Efficiency here, refers to improved credit allocation to borrowers with higher expected returns for given level of risks and increased competition resulting from liberalized entry and the removal of regulations that restrict competition putting moral hazard and adverse selection problems in check.

Advocates of financial liberalization argue that the liberalization of financial markets allows for more varied and specialized intermediation between the surplus–spending units (savers) and deficit–spending units (borrowers) using varied institutions, instruments and products (Odhiambo, 2011) [9]. It also facilitates freer flow of resources to where it can be best invested in terms of higher risk adjusted rates of return. In other words, financial liberalization through the forces of the market help in identifying who wants to save or lend, for what purposes, as

well as who wants to borrow and on what terms. It also facilitates the flow of financial resources to activities or investment projects with the best returns having moral hazard and adverse selection problems in check. In other words, financial liberalization through the instrumentality of market forces ensures that those who value financial resources the most are those who get such resources. Thus, financial liberalization ensures that the financial system allocates resources such that there cannot be better alternative arrangement for resources allocation. It gives the best incentives to savers and borrowers and by so doing improve efficiency which ultimately stimulates economic growth. Financial liberalization can contribute meaningfully to the growth of an economy through the facilitation of savings – by providing ranges of saving drives and increasing the saving rate which would encourage the pooling of funds from small savers. It can also contribute by redirecting credits from slow growing /less efficient sectors to fast growing /more efficient sectors having adverse selection and moral hazard problems in check. Furthermore, financial liberalization encourages financial sector development that promotes specialization, technological development in production as well as the development of entrepreneurial drives (Ansari, 2002). Generally, financial liberalization is beneficial in the sense that it fosters development and increases long run growth (Levine, 1997; Demirguc-Kunt and Detragiache, 1998) [1]. Notwithstanding the benefits of financial liberalization, there are dissenting views about its effectiveness. Prominent among them are Stiglitz (1994) [43]; Campbell and Mankiw (1990); Bandiera, Caprio, Honohan and Schiantarelli (2000) [12]; among others.

2.2 Review of empirical literature

Cook, Hababou and Roberts (2001) [15] examined the effects of financial liberalization on Tunisian banking industry using Data Envelopment Analysis (DEA) models and panel data covering the period 1992 -1997. The study found that financial deregulation has been beneficial to privately owned banks and because of the cautious and well-timed deregulation process, the financial system in Tunisia remained relatively stable despite the turmoil arising from the Asian crisis that crippled many emerging economies of the world.

Kasekende and Atingi–Ego (2003) evaluated the impact of financial liberalization on banking business and its effect on the real sector in Uganda using quarterly data from 1987Q1 to 1995Q3 and adopting the vector autoregressive (VAR) method. They found that financial liberalization has brought about efficiency gains in the banking industry, and has encouraged the flow of credit to the private sector thereby enhancing economic growth in Uganda.

Nair (2004) tested the McKinnon and Shaw hypothesis using financial liberalization index (constructed from total credit to household sector by banks and other financial institutions, foreign investment, market capitalization ratio and real effective exchange rate) on household saving rate in India for the period 1970/1971 to 1999/2000. The study showed that financial liberalization brought about increased credit availability and encouraged households to borrow for consumption rather than investment by business firms. Thus the study provided evidence to nullify the McKinnon –Shaw complementarily hypothesis.

In an attempt to model the relationship between financial development and economic growth in Egypt, Abu-Qarn (2005) [2] estimated a Vector Autoregression (VAR) model from annual time series data from 1960 to 2001 using gross domestic product as a proxy for economic growth and proxies of financial development such as the ratio of money stock to gross domestic product, ratio of banks credit to private sector to gross domestic product and ratio of credit issued to non-financial private firms to total domestic credit. They found substantial increase in private investment which was facilitated by financial liberalization in the 1990s which led to rebound of the performance of the economy in Egypt.

Ahmed (2006) evaluated the impact of financial liberalization policies in Botswana and concluded that in line with financial liberalization objectives, the country experienced improvement in both the level of savings and efficiency of investment.

Bashar and Khan (2007) found a result contrary to the McKinnon and Shaw hypothesis. Analysing the impact of financial liberalization on economic growth in Bangladesh using quarterly data covering $1974Q_1$ – $2002Q_2$, they proxied economic growth by Gross Domestic Product per capita and gross investment as a share of Gross Domestic Product, labour force as a share of population, secondary school enrolment, trade openness indicator, real rate of interest and net capital inflows as explanatory variables. They found an inverse relationship between economic growth and the coefficient of financial liberalization policy variable (real interest rate).

In an attempt to explore the relationship between financial liberalization and growth of an economy, Faira, Paula and Meyer (2009) [19] investigated the relationship between capital account liberalization, economic performance and macroeconomic stability in Brazil developing dejure and defacto models and using quarterly data covering 55quarters ($1994Q_2$-$2007Q_4$) and using Vector Auto-Regression (VAR). Their result supports the argument that the destabilizing effect of financial liberalization outweighs its beneficial effects.

Banam (2010) [11] using time series data from 1965 – 2005 investigated the determinants of economic growth in Iran with financial liberalization index comprising interest rate control, reserve requirements and directed credit. The study found a supportive evidence of McKinnon –Shaw hypothesis with the result showing positive and statistically significant impact on economic growth. The researcher concluded that financial liberalization can promote economic growth by increasing investment and productivity.

Adamopoulos (2010) [4] gave an empirical backing to the debate of finance – led growth or growth led finance using effect of credit market development as proxies for financial market development for a period of forty two years (1965 - 2007) in Ireland and found out that economic growth granger causes credit market development (uni-directional market development) while there is a bi-directional causality between economic growth and stock market development. Consequently, the study inferred that economic growth has a positive effect on credit market as well as stock market development.

Bakare (2011) investigated the impact of financial liberalization and economic growth in Nigeria. The study used the ordinary least square to examine the relationship between financial sector liberalization and economic growth. The error correction mechanism was used to determine the long run relationship among such variables as growth rate of national income, the rate of savings, private

investment, interest rate, nominal exchange rate, gross fixed capital formation and financial liberalization index. The results of the study show a significant and negative relationship between financial liberalization and economic growth in Nigeria. The study concludes that financial liberalization so far does not function or work properly in Nigeria and that there is need to revisit the structural adjustment programme so as to enhance the efficiency of the liberalization programme.

Adam (2011) investigated the impact of financial openness, including growth on poverty reduction in Ghana for the period 1970-2007 using annual living standard index as proxy for poverty and financial liberalization index constructed using principle component analysis (CAP). The study found a positive relationship between growth and living standards. Thus, the study showed that financial liberalization had contributed positively to economic growth in Ghana.

In an attempt to evaluate the McKinnon –Shaw complementarily hypothesis, Sulaiman, Oke and Azeez (2012) [44] investigated the effect of financial liberalization on economic growth focusing on Nigeria using Gross Domestic Product as a proxy for economic growth, financial deepening indicator (M2/GDP) as a proxy of financial liberalization and other control variables. Data obtained from the Central Bank of Nigeria (CBN) bulletin were subjected to unit root and co-integration test. The study found supporting evidence to McKinnon –Shaw hypothesis that financial liberalization has stimulated economic growth in Nigeria. Consequently, the study recommended among others, that the economy adopts liberalization policies.

Nkemakolam (2017) investigated bank interest rate reforms on economic growth for the period 1986 – 2013 using unit root and cointegration test on gross domestic products, interest rate, Treasury bill rate and monetary policy rate. The unit root result difference and the cointegration test showed one cointegrating equation among the variable and the multivariate ordinary least square regression showed that interest rate had adverse effect on the growth of the Nigerian economy therefore, interest rate policy reforms cannot stimulate economic growth in Nigeria and the study recommended that market forces should be allowed to determine interest rate with little guided intervention and close monitoring to ensure effective contribution of interest rate on savings, investment and growth. Lastly, the central bank of Nigeria should form synergy with the federal ministry of finance to implement proactive fiscal policies that would support interest rate reforms for purposes of financial intermediation that would result to higher growth in savings and investment.

Both theoretical and empirical literatures were reviewed extensively to understand as well as appreciate what scholars have done over the years concerning the study. The review revealed that there is no clear answer to the effect of financial liberalization on economic growth. Scholars are divided on theoretical as well as empirical studies. The major reason for the lack of consensus as observed is the absence of good and homogenous measures of financial liberalization policies across countries and overtime.

3. Materials and Method

Mckinnon and Shaw (1973) [30] advocated the removal of financial repressive policies which they believe is a major obstacle to increasing savings as most times these policies keep interest rates lower than inflation rate which culminate to negative real interest rate. This negative real interest discourages surplus spending units from keeping their funds with financial intermediaries. Thus, Mckinnon and Shaw advocated for financial liberalization policies to be put in place so as to allow for market determined rate of interest that will encourage savings. As savings increase, investment would also increase which ultimately bring about economic growth. Thus the Mckinnon-Shaw hypotheses imply that a number of variables are pertinent to financial liberalization. These are interest rate, saving, investment and growth rates.

However, De Gregorio and Guidotti (1993) [16] claim that real interest rates are not a good indicator of financial repression, and that a better indicator of repression is the ratio of credit to private sector to GDP or a similar measure of financial development.

Bumann, Hermes and Lensink (2012) in their meta-analysis discovered that the heterogeneity in result findings as it concern studies of financial liberalization and economic growth emanated from different measures adopted by authors to measure financial liberalization. Some studies such as kose *et al*. (2006) and Quinn and Toyoda (2008) considered capital account variables as proxy for financial liberalization. Similarly, Bekart and Harvey, (2000); Bekaert *et al*, (2005) considered variables associated with equity market liberalization. These differences in measurement or proxy for financial liberalization to some extent account for the divergent empirical findings associated with the financial liberalization-growth nexus. Three broad categories of measures of financial liberalization namely capital account, equity market and banking sector liberalizations are often used (Bumann *et al*, 2012). In line with the above reasoning, a financial liberalization index that cut across seven financial sector reforms developed by Abiad, Detragiache, and Tressel (2008) [1] were extended and used.

Following the above narrative, the effect of financial liberalization on economic growth is stated as follows:

$$dppc = f(flib, rsv, gexp, docr) \quad (1)$$

$$gdppc = \alpha_0 + \alpha_1 lib + \alpha_2 reserv + \alpha_3 gexp + \alpha_4 docr + u \quad (2)$$

Where: $gdppc$ is gross domestic product per capita growth rate which is a proxy for economic growth $flib$ is the financial liberalization index $reserv$ is the ratio of external reserve to short term debt

gexp is the ratio of government expenditure to gross domestic product

$docr$ Is the ratio of domestic credit to the private sector to gross domestic product?

Equation (1) is the functional form of the model and is the exact form but economic relationship are inexact therefore equation (2) incorporates the stochastic term, u.

Apriori expectations are: $\alpha_1, \alpha_2, \alpha_3 \& \alpha_4 > 0$..

The data required for this study is secondary in nature and was sourced from the World Bank data catalog from internet and journals.

The study employed descriptive and quantitative analysis. The descriptive analysis comprises measures of central tendencies, dispersion, skewness, kurtosis and graphs were used to analyse drifts in the data. The behaviour of the dataset using the descriptive analysis determined the

appropriate method adopted for the study. We suspected that the dataset are not mean-reversing, a formal unit root test was conducted using Im, Pesaran and Shin (IPS) panel unit root test and a Pooled Mean Group (PMG)/ Autoregressive Distributed Lag (ARDL) estimation method to explore the long run relationship among the variables.

4. Results and Discussion

4.1 Results Presentation

Table 1: Descriptive Statistics for Lower Middle Income Countries

	GDPGR	FLIB	GEXP	RESERV	DOCR
Mean	2.484142	0.606306	24.44756	49.13264	30.07691
Median	2.101454	0.666667	25.07244	22.26449	17.90894
Maximum	30.35658	0.952381	36.56868	444.3568	71.54544
Minimum	-6.847202	0.000000	9.615626	2.714111	3.139281
Std. Dev.	3.927451	0.249010	6.505904	77.35025	21.52893
Skewness	2.800781	-0.529591	-0.243954	3.401445	0.418123
Kurtosis	21.52499	2.159414	2.519988	15.42698	1.584074
Jarque-Bera	1997.614	9.751741	2.498481	1070.449	14.42217
Probability	0.000000	0.007628	0.286723	0.000000	0.000738
Sum	317.9701	77.60714	3129.287	6288.978	3849.844
Sum Sq. Dev.	1958.959	7.874769	5375.501	759848.7	58863.82
Observations	128	128	128	128	128

***Source*:** E-view computer output.

Table 1 above shows the descriptive statistics of variables in the regression model of lower middle income countries. From the table, there are 128 observations. During the period under review gross domestic product per capita growth rate (GDPGR) had a minimum of- 6.84%. The maximum value of this variable was 30.35%; while the mean and median of gross domestic product per capita growth rate (GDPGR) are 2.484142and 2.101454 respectively. Also, during the period under investigation, financial liberalization index, reached the minimum of 0.000; while it achieved the maximum value of 0.66667. The financial liberalization index averaged 0.606306 during the period under review. For the period of 32 years, government expenditure in the lower middle income countries averaged 24.44756 billion naira per quarter. The highest value during the period was $36.56868 billion; while the minimum value was 9.615626 billion. Reserves (RESERV) in the lower middle income countries had an average of 49.13264 billion. The maximum and minimum values of the reserves were 444.3568 and 2.714111billion respectively. The maximum and minimum values of the domestic credit (DOCR) were 71.54544 and 3.139281 respectively. The mean value of the domestic credit was 30.07691**.**

The Skewness values for all the variables are greater than 0.00. Financial liberalization index, and government expenditure have skewness value less than 0.00. Domestic credit has skewness value of 0.4181. They are skewed to the left. They are not much different from zero. Their distributions can be taken as normal. Reserves and government expenditure have skewness value greater than 0.00. This implies that the distributions of the variables are positively skewed. The Kurtosis values for gross domestic product growth rate and reserves are greater than 3.000. Thus, they have excess kurtosis and are leptokurtic, that is, their distributions have tops that are more pointed than the normal distribution. The kurtosis value for government expenditure (GEXP), domestic credit (DOCR) and financial liberalization index are less than 3.00. This means that their distribution have flatter top than the normal distribution. It is platykurtic. The Jacque-Bera (JB) test of normality for the variables shows that the distributions of the GDPGR, FLIB, GEXP, RESERV, DOCR, are not normal. The P-values of the JB statistics for these variables are less than the critical 0.05. Only the distribution of government expenditure is normal.

Table 2: Descriptive Statistics for Upper Middle Income Countries

	GDPGR	FLIB	GEXP	RESERV	DOCR
Mean	2.065626	0.554781	28.65267	482.4617	30.83370
Median	1.806413	0.535714	28.73461	48.75406	22.78415
Maximum	122.9683	0.952381	38.60811	3840.120	78.29413
Minimum	-62.22509	0.035714	17.09739	4.461327	3.904611
Std. Dev.	13.09547	0.247852	3.681693	850.3762	22.49672
Skewness	5.252636	-0.341874	-0.261445	2.222477	0.699886
Kurtosis	62.51549	2.343497	3.373851	7.339979	2.028888
Jarque-Bera	19479.76	4.792035	2.203615	205.8295	15.47956
Probability	0.000000	0.091080	0.332270	0.000000	0.000435
Sum	264.4002	71.01191	3667.542	61755.10	3946.714
Sum Sq. Dev.	21779.41	7.801684	1721.468	91838736	64275.01
Observations	128	128	128	128	128

***Source*:** E-view computer output.

Table 2 above shows the descriptive statistics of variables in the regression model of upper middle income countries. From the table, there are 128 observations. During the period under review gross domestic product per capita growth rate (GDPGR) across the upper middle income countries had a minimum of- 62. The maximum value of this variable was 122 while the mean and median of gross domestic product per capita growth rate (GDPGR) across the upper middle income countries are 2.065626 and 1.806413 respectively. Also, during the period under investigation, financial liberalization index across the upper middle income countries reached the minimum of 0.035714; while it achieved the maximum value of 0.952381. The financial liberalization index averaged 0.554781during the period under review. For the period under review, government expenditure across the upper middle income countries averaged 28.65267billion naira per quarter. The highest value during the period was 38.60811; while the minimum value was 17.09739. Reserves (RESERV) in the across the upper middle income countries had an average of 3840.120. The maximum and minimum values of the reserves were 3840.120 and 4.461327 respectively. The maximum and minimum values of the domestic credit (DOCR) in the upper middle income country were 78.29413 and 3.904611 respectively. The mean value of the domestic credit was 30.83370**.**

The Skewness values for all the variables are greater than 0.00. Financial liberalization index, and government expenditure and domestic credit have skewness value of that are close to zero. They are not much different from zero. Their distributions can be taken as normal. Reserves and gross domestic product growth rate have skewness value greater than 0.00. This implies that the distributions of the variables are positively skewed. The Kurtosis values for RESERV, GDPGR and GEXP are greater than 3.000. Thus, they have excess kurtosis and are leptokurtic, that is, their distributions have tops that are more pointed than the normal distribution. The kurtosis value for financial

liberalization index and domestic credit (DOCR) are less than 3.00. This means that their distribution have flatter top than the normal distribution. It is platykurtic. The Jacque-Bera (JB) test of normality for the variables shows that the distributions of the GDPGR, RESERV DOCR, are not normal. The P-values of the JB statistics for these variables are less than the critical 0.05. The distributions FLIB, GEXP, of government expenditure are normal.

Panel Unit Root Test

The Im, Pesaran and Shin (IPS) panel unit root was carried out and the result extracted and presented below on table 3

Table 3: IPS Panel Unit Root Test Results

Variables	Upper-Middle Income Countries		Lower-Middle Income Countries	
	Level	1ST Difference	Level	1ST Difference
GDPGR	-4.35***	---	-5.37***	---
FLIB	0.91	-6.74***	0.31	-7.71***
GEXP	-1.76**	---	-0.41	-8.64***
RESERV	-0.79	-5.49***	-0.21	-5.89***
DOCR	-0.19	-7.41***	0.59	-8.30***

*** & ** indicate significance at 1% and 5% respectively.
***Source*:** Author's Computation using E-Views 9.1

Table 3 shows the panel unit root result of classification by income level. Countries are classified in line with the World Bank classification as Upper-Middle Income and Lower-Middle Income countries. Countries that fall in the upper-middle income are Algeria, Botswana, Libya and South Africa while countries of lower-middle income are Ghana, Nigeria, Morocco and Tunisia. The result shows that Gross Domestic Product Per Capita Growth Rate (GDPGR) is stationary at level for both upper-middle income and lower-middle income countries with a test statistic of -4.35 and -5.37 with their respective probability value of 0.00 and 0.00 which are less than 1% significant level thus rejecting the null hypothesis of unit root presence. A further look at the table also show that the Financial Liberalization Index (FLIB) is not stationary at level both for upper-middle and lower-middle income countries given their respective test statistic of 0.91 and -0.31 with their associated probability values therefore the null hypothesis of the presence of unit root could not be rejected. However, its first difference is stationary with a test statistic of -6.74 and -7.71 at 1% significance level. The coefficient of Government Expenditure (% of GDP) is stationary at level for upper-middle income countries but its first difference was stationary given the test statistic of -8.64 at 1% significance level. Again, a look at table 3 also show that Foreign Reserve (RESERV) is not stationary at level for both income groups as the null hypothesis of presence of unit root could not be rejected given the values of -079 and -0.21 and their respective probability values but their first different is stationary at 1% significance level. Thus, the variable (RESERV) is integrated at order 1. Similarly, the null hypothesis of the presence of unit root for Credit to Private Sector for both upper-middle income and lower-middle income countries but the first difference of the variable is stationary at 1% significance level given the test statistic of -7.41 and -8.30.

Table 4: PMG/ARDL Model Estimation Result

Variable	Upper-Middle Countries	Lower-Middle Countries
	Coefficient	Coefficient
Long Run Equation		
DOCR	-0.01	-0.02
FLIB	6.00***	1.25**
RESERV	0.00	0.02***
GEXP	-0.27***	-0.17**
Short Run Equation		
COINTEQ01	-0.86***	-1.02***
Δ(DOCR)	-0.80	-0.20
Δ(FLIB)	30.63	-4.18
Δ(RESERV)	0.00	-0.02
Δ(GEXP)	-0.40*	-0.27
C	5.38***	6.33

***, **&* indicate significance at 1%, 5% & 10% respectively.
***Source*:** Author's Computation using E-Views 9.1

Table 5: Short Run Coefficients for Upper-middle Income Countries

Variable	Algeria	Botswana	Libya	South Africa
Cointeq01	-0.93*	-0.63	-1.30*	-0.56*
ΔFLIB	-7.33	16.15	11.85	1.86
ΔGEXP	-0.07**	-0.12	-1.09	-0.31*
ΔRESERV	0.00*	0.00*	0.03	-0.02*
ΔDOCR	-0.05*	-0.60	-2.57**	0.01**

*, ** & *** indicate 1%, 5% & 10% significance level respectively.
***Source*:** Author's Computation using E-Views 9.1

Table 6: Short Run Coefficients for Lower-middle Income Countries

Variable	Ghana	Morocco	Nigeria	Tunisia
Cointeq.01	-0.40*	-1.69*	-0.75*	-1.24*
ΔFLIB	-4.38	-19.18	13.36	-8.54
ΔGEXP	0.18	-0.60**	-0.00	-0.66*

ΔRESERV	-0.01**	-0.06*	-0.00*	-0.00
ΔDOCR	-0.47*	-0.05**	-0.06	-0.22*

*, ** & *** indicate 1%, 5% & 10% significance level respectively.
***Source*:** Author's Computation using E-Views 9.1

Table 4 shows the long and short run results for upper-middle income and lower-middle income countries.

In the long run, the coefficient of Financial Liberalization Index (FLIB) appeared with a positive sign for both income groups. The coefficient for both income groups are 6.00 and 1.25 for upper-middle income and lower-middle income countries respectively. The coefficients are significant given their probability values which are less than the critical values at 5% significance level. The coefficient of Credit to Private Sector to Gross Domestic Product appeared with a negative sign suggesting an inverse relationship with Gross Domestic Product Per Capita Growth Rate (GDPGR) for both upper-middle income and lower-middle income countries. However the coefficients are not significant given their reported probability values.

The coefficient of Foreign Reserve (RESERV) appeared with a positive sign suggesting a direct relationship with (GDPGR) for both income groups. The magnitude of this coefficient for lower-middle income countries is greater than that of upper-middle income countries. In terms of significance, the lower-middle income countries coefficient is significant given it associated probability value which is less than 5% significance level.

The coefficient of Government Expenditure as a percentage of Gross Domestic Product appeared with a negative sign for both income groups. The coefficient of -0.27 and -0.17 shows that the upper-middle income countries is more affected than lower-middle income countries and the coefficients are significant at 1% and 5% level of significance respectively for upper and lower-middle income countries.

In the short run equations, error correction term (COINTEQ01) for upper-middle income countries is -0.86 and this coefficient is significant at 1% significant level. In the same vain, (COINTEQ01) for lower-middle income group is -1.02 and also significant at 1% significance. These coefficients suggest that the variables in the model have long run relationship and deviations from the long run pact are reconciled in the shortest possible time. The short run coefficient for Financial Liberalization Index for upper-middle income group suggest positive relationship with (GDPGR) while that of lower-middle income countries suggest negative relationship with (GDPGR). These coefficients are however not significant. In the same vein, Foreign Reserve (RESERV) is positively related to economic growth for upper-middle income countries and negatively related to lower-middle income countries. The coefficient for lower-middle income countries is significant at 10% level of significance while the coefficient for upper-middle income is not significant.

The short run coefficient for credit to private sectors as a percentage to GDP is -0.80 and -0.20 respectively for upper and lower-middle income countries. The negative signs on both coefficients suggest an inverse relationship between the variable and Gross Domestic Product Per Capita Growth Rate. The coefficient for upper-middle countries is not significant whereas the coefficient for lower-middle countries is significant. The coefficient of Government Expenditure (% of GDP) (GEXP) for upper middle income countries is -0.40 and is significant at 10% level of significance. This shows that government expenditure does not stimulate economic growth in the short run rather it discourages growth. The coefficient of government expenditure (% of GDP) for lower-middle income countries is -0.27 but it is not significant.

Table 5 above shows the short run coefficients for upper-middle income countries. The coefficient of the cointegrating equation for Algeria was -0.93 suggesting that deviation from equilibrium is reconciled annually at a speed of 93% while that of Botswana is reconciled annually at 63% and South Africa at 56%. The speed of adjustment for Libya of 1.30 indicates explosive process for the country. All co-integrating equation coefficients for the four countries except Botswana are significant at 1% significant level.

The coefficient for financial Liberalization index for Algeria showed up with a negative sign suggesting an inverse relationship between financial Liberalization and economic growth in the short run while the coefficient for Botswana, Libya and South Africa appeared with their theoretical expected positive sign. However, these coefficients are not significant. Thus, the effect of financial liberalization on economic growth can be said to be uniform since these coefficients are jointly not different from zero.

The coefficient of government expenditure for Algeria, Botswana, Libya and South Africa appeared with a negative sign suggesting an inverse relationship government expenditure and economic growth in the short run. The coefficient for Algeria, Botswana and South Africa were less than unity while the coefficient for Libya was marginally above unity. The coefficient for Algeria and South Africa were significant at 5% and 1% respectively while the coefficient for Botswana and Libya were not significant.

Algeria and South Africa had a negative coefficient for external reserve while that of Botswana and Libya had a positive coefficient. The coefficient of external reserve for Algeria, Botswana and South Africa are significant at 1% significant level whereas the coefficient for Libya is not significant. Finally, the coefficient of domestic credit for Algeria, Botswana and Libya are inversely related to economic growth in the short run as the coefficients appeared with negative signs while the coefficient for South Africa appeared with a positive sign. By magnitude, the coefficients for Algeria, Botswana and South Africa are less than unity while that Libya was greater than unity.

Tables 6 show the short run coefficients for lower middle income countries. The cointegrating equation coefficient for all the countries appeared with their theoretical expected negative signs and significant at 1% significant level. This shows that deviations from equilibrium are reconciled annually. The coefficient of financial liberalization showed that financial liberalization is inversely related to economic growth for Ghana, morocco and Tunisia while coefficient for Nigeria showed up with its theoretical expected positive sign.

However, these coefficients are not significant. Thus, there is uniformity on the effect of financial liberalization on

economic growth in the selected lower middle income countries. The coefficient of government expenditure appeared negative for all four countries except for Ghana and these coefficients are significant except the coefficient for Nigeria. The coefficients for external reserve for all four countries are negative suggesting an inverse relationship between external reserve and economic growth. Similarly, all four countries appeared with negative sign expecting inverse relationship between domestic credit and economic growth in the short run.

4.2 Discussion of Findings

Financial liberalization has a positive and significant effect on economic growth in both upper – middle income and lower – middle income countries.

This implies that a unit increase in financial liberalization bring about 6 units increase in output of upper-middle income countries. For lower-middle income countries, a unit increase in financial liberalization index brings about an increase in economic growth by 1.25 units. By magnitude, the coefficient for upper middle countries is almost 5 times greater than the coefficient for lower-middle income countries. Although, financial liberalization has stimulated growth in both income groups but the upper-middle income group has had greater impact of liberalization on output growth. This finding is in consonance with the observation of Abiad, Detragiache, and Tressel (2008) [1] and the findings of Akinsola and Odhiambo (2017) [9].

Negative relationship exists between domestic credit to private sector and economic growth. This implies that increase in the domestic credit inhibit economic growth. This revelation is not surprising given the issues of adverse selection and moral hazard problems associated with deposit money banks' credit decisions.

Foreign reserve has had positive and significant effect on economic growth for lower – middle income countries specifically. A unit increase in foreign reserves brings about increase in economic growth by 0.02 units. This shows that foreign reserve passes the necessary signals that aid businesses which culminate to economic growth in the long run. This cannot be said for upper – middle income countries has coefficient for foreign reserve is not significant.

Government Expenditure is negatively related to economic growth the coefficient for upper middle income countries shows that a unit increase in government expenditure bring about reduction of economic growth by 0.27 unit while coefficient for middle income countries suggest that a unit increase in government expenditure bring about reduction of economic growth by 0.17 unit.

5. Conclusion and Recommendations

This study investigated the effect of financial liberalization on economic growth in selected lower-middle and upper-middle income countries of Africa from 1986 to 2017. To achieve this, descriptive statistics and Pooled Mean Group (PMG) /Autoregressive-Distributive Lag (ARDL) estimation method were employed to analyze the data. The result of the Pooled Mean Group (PMG) / Autoregressive-Distributive Lag (ARDL) model revealed that financial liberalization has had significant influence on economic growth in both upper-middle income and lower-middle income countries but more potent in upper-middle income countries relative to lower-middle income countries. This study therefore concludes that financial liberalization policies stimulate output growth in the long run both in lower-middle and upper-middle income countries and recommend that more policies of liberalization should be pursued by these countries so as to boost investors' confidence for them to bring in the much needed capital required for investment which ultimately would translate to more growth in their economies. Secondly, financial reforms should be adopted in a gradual and cautious manner in line with the need of an economy and not based on pressures from international donors/ development assistance agencies. Thirdly, proper sequencing of financial reforms should be encouraged. For instance, reforms aimed at strengthening the financial systems internally should be adopted before embarking on reforms aimed at liberalizing capital account to avoid destabilizing effects of capital flight.

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