Effects of Financial Deepening on Saving Mobilization: Evidence from African Countries

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Abstract:

Purpose: The purpose of this paper is to investigate the impact of financial deepening proxied by Broad Money Supply as a percent of Gross Domestic Product and Domestic Credit to Private Sector as a percentage of Gross Domestic Product on savings proxied by Gross Domestic Savings as a percent of Gross Domestic Product in Africa over the period 1998 – 2015


Findings: The paper finds an insignificantly positive relationship between Broad money supply and Gross Domestic Savings in Africa. However, the impact of Domestic Credit to Private Sector was negative and significant. This results indicate that financial deepening has not stimulated domestic resource mobilization in Africa. However, growth in per capita income had a significantly positive impact on Gross Domestic Savings which is consistent with the life cycle theory, increase in real interest rate negatively affected Gross Domestic Savings while increase in age dependency reduced Gross Domestic Savings.

Practical implications: Policies should focus on deepening the financial sector since it has the tendency to impact positively on savings. Such policies should center on extending financial services to the rural areas through the provision of infrastructure such as roads, electricity as well as the development of innovative financial instruments that will attract the large informal sector. Reducing the fragmented nature of the market and the high transaction costs as well as balancing the dominance of the banking sector will help improve efficiency of the sector and consequently, its ability to mobilize resources. Pursuing growth-enhancing policies that focus on value addition to raw materials and the adoption of technology to ensure efficiency in production could result in higher productivity and consequently savings. Efforts should also focus on reducing interest rates since many Africans are net borrowers and thus increase in interest rate will increase the cost of borrowing which will have adverse impacts on savings.

Originality/value: The paper offers significant value in shaping and improving the financial sector in Africa with the view to enhancing savings.
1.0 Introduction:

Financial deepening is defined by Mohan (2006) to include improvement in the efficiency and regulation of the financial sector as well as increasing the range and access of the population to financial services. In addition, it measures the extent to which the financial system provides funding for entrepreneurial activities. Five main functions of the financial sector has been identified by Levine (2005) as contributing to the growth of an economy. These include the pooling and mobilization of savings, facilitating the exchange of services and goods, hedging, trade and risk pooling. They provide information that helps firms to allocate resources and exert corporate governance which are achieved either through direct or indirect bank based finance (Levine, 2005; Nowbutsing et al, 2010). These functions enable the sector to attract deposits as well as ensuring efficient and effective resource allocation which ultimately stimulates growth. Unfortunately, many African countries do not have efficient financial systems as government controls the sector through financial repressive policies such as interest rate controls, credit ceiling and borrowings (Aryeetey, 2008).

On the issues of financial deepening and domestic savings mobilization, the theoretical framework provided by Keynes (1936) advocated for government interference in financial markets to generate growth through repressive financial policies such as interest rates and credit controls. However, McKinnon (1973) and Shaw (1973) both argue against repressive financial policies claiming that they act as disincentives to savings mobilization, and that a developed financial system will increase the efficiency and effectiveness of financial intermediation (Schmidt-Hebbel and Serven, 2002). Following the work of McKinnon (1973) and Shaw (1973), many developing economies including those in Africa have resorted to liberalizing their financial systems by reducing the involvement of government in the sector, through the privatization of its banks, among others. Such policies, through the mobilization of savings is expected to promote growth through improvement in financial intermediation, efficiency of resource allocation and increased investments (Cobbina, 1999).

Domestic resource mobilization can be considered as the savings and investments generated by households, domestic firms and governments. Mobilizing resources domestically is not prone to the dangers associated with external mobilization like Official Development Assistance (ODA) and foreign direct investments, which are associated with some conditionalities and challenges. For example, aid and other ODA exhibit volatility and uncertainty and may be characterized by conditions such as currency appreciation and reduced export earnings. Also, foreign direct investments are mostly meant to serve the interest of investors rather than the needs and developments of the country (Culpeper and Bhushan, 2008).

The challenge confronting the stimulation of domestic resource mobilization, particularly in Africa, is that they are scarce in these countries. Accordingly, increasing domestic resource mobilization has been termed by some economists as a hard option when compared to mobilizing foreign resources (Aryeetey, 2009). Moreover, many countries continue to experience an erosion of their domestic resources due to repressive policies like tariff reduction, reduced revenues from corporate taxation, and capital flight (Baunsgaard and Keen, 2005). Savings as well as financial deepening indicators for the African region are relatively low compared to those obtained in developed regions such as the European Union. Specifically, while Gross Domestic Savings (GDS) as a percentage of GDP and Domestic Credit to the Private Sector (DCPS) as a percentage of GDP in Africa has averaged 18% and 55% over the period 1992 to 2015 respectively, that of the European Union has averaged 23% and 84% over the same period.

In spite of the many empirical research, the impact of financial deepening on domestic resource mobilization has not been adequately explored in Africa though the issues are central to the overall development process. Empirical works on the
financial deepening – domestic resource mobilization debate in Africa are inconclusive with most studies (see Quartey, 2005; Odhiambo, 2008; Quartey and Prah, 2008) having focused on using bivariate causality test which suffers from the omission-of-variables bias (Gries et al, 2009) as well as their emphasis on selected countries in Africa. In addition, the various reforms in Africa’s financial sector have influenced financial deepening and it is expected to have impacted on domestic savings mobilization. However, not much success has been recorded in domestic savings mobilization from various African countries as they still lag behind their counterparts in other parts of the world. In view of this, the following research questions are posed: What are the key drivers of domestic savings mobilization in Africa? Has financial deepening stimulated domestic savings mobilization in Africa? This paper aims at addressing these issues by investigating whether financial deepening has any effect on domestic resource mobilization in Africa using data from 42 African countries for the period 1998-2015.

The rest of the study is organized as follows: Section two reviews related literature on the topic while section three explains the methodology. Section four discusses the results while the last section concludes and makes policy recommendations.

2.0 Theoretical literature

The literature offers two broad theories that have provided some explanation to the impact of financial deepening on domestic resource mobilization. These are the Life Cycle Hypothesis proposed by Modigliani (1986) and financial repression theory pioneered by McKinnon (1973) and Shaw (1973).

The life-cycle theory is a model that explains how individuals plan their consumption and savings behavior over their lifetime. It assumes that individuals would want to smoothen their consumption over time and consequently, increase in individuals’ income leads to an increase in the aggregate saving rate, since relative to the elderly, the lifetime savings of the working class increases (Athukorala and Sen, 2004). Thus, economies with higher growth rates in income per capita are expected to have higher savings compared to those with lower per capita income growth rates. Green et al., (2005), put this in a different way by arguing that prior to the development of the financial system, individuals had limited access to financial intermediation. However, with the introduction of financial systems, the use of financial markets to smoothen consumption over time becomes possible. Financial deepening ensures competition in the market for finance, thereby removing the challenge of running into debt. The implication is that individuals can borrow at younger age and pay later in order to attain their optimal lifetime consumption path.

Many studies that touch on the determinants of savings, such as Kelly and Mavrotas (2008); Quartey (2005); and Ang (2010) either on individual country basis or on group of countries adopted the Life Cycle Theory. This is because of its capability of explaining the variables that determine savings and therefore provides the theoretical basis for this study.

According to McKinnon (1973) and Shaw (1973), financial deepening stimulates savings through efficiency improvements in intermediation which provides alternative avenues for saving that ties in with individual preferences, income profiles, and risk-averse nature of those individuals (Schmidt-Hebbel and Serven, 2002). Developments associated with financial deepening, such as reduction in queuing time at the bank, spread of geographical location of bank branches, waiving of minimum deposit requirements, among others contribute significantly to the willingness to participate in the financial system (Honohan, 1999). Although research on the relationship between financial deepening and savings has been high on the agenda of the developed world as can be seen in works of Balamoune and Chowdhury (2003) as well as Kelly and Mavrotas (2003), among others, the same cannot be said about African countries.
2.1 Some Empirical Evidence

Ziorklui (2001) looked at the impact of banks efficiency and financial development on sustainable savings mobilization within the context of the financial sector reforms in Ghana. His results showed that, financial sector development significantly impacted on the ability of the Ghanaian banking sector to mobilize savings. A study by Athukorala and Sen (2004) using the life-cycle model and data for the period 1954–1998 investigated the macroeconomic determinants of savings in India. Results from the study provided evidence of a statistically significant positive effect of financial development on domestic savings.

Quartey and Prah (2008) employed the Granger causality test to investigate the causal relationship between financial sector development and saving mobilization in Ghana using Domestic Credit to the Private Sector (DCPS) as a percentage of Gross Domestic Product (GDP) as a proxy for financial development. Results from the study did not show any causality between the two variables. The authors attributed the results mainly to the underdeveloped nature of the financial sector and recommended that policies focus on improving the financial sector.

The work of Odhiambo (2008) employed the Johansen cointegration test to examine the long run relationship between financial development and domestic savings in Tanzania for the period 1968-2001. The result showed that the development of the financial sector positively affects the level of domestic savings. Consequently, the study recommended the implementation of policies aimed at promoting financial sector development if savings are to be enhanced. In a related study, Ang (2011) using data for the period 1960 to 2007 investigated the financial system’s impact on savings in Malaysia using the error correction estimation techniques. The result showed that financial deepening significantly impacted on savings and it was positive. However, in examining the impact of insurance markets and financial liberalization on saving, the paper conversely found a negative relationship in Malaysia. Reasons given for this occurrence is that financial deepening could impact positively on borrowing patterns which has the potentials to increase consumption at the expense of savings.

At the cross-country level, Bandiera et al. (2000) used data from 1970 to 1994 to estimate savings and its determinants for a number of countries including Ghana, Korea, Mexico, Indonesia, Turkey, Malaysia, Chile and Zimbabwe employing the OLS estimation techniques and concluded that the link between financial liberalization and savings mobilization is ambiguous. Using the Pedroni panel cointegration test and data for period 1972 to 1994, Mavrotas and Kelly (2008) studied 17 countries in Africa. The authors established an inconclusive result even though for some of the countries a positive relationship was established. Recommendations focused on paying more attention to the channels through which financial systems can improve savings.

A study by Sahoo and Dash (2013) on South Asia that employed panel cointegration test concluded that financial system development facilitates savings mobilization. A related study by Horioka and Yin (2010) on developing Asia for the period 1966-2007 analyzed the determinants of domestic savings rate and concluded that financial sector development increases domestic savings rate up to a certain threshold and thereafter decreases, indicating a U-shaped relationship.

Bayar (2014) analyzed the effect of financial development on domestic savings using a sample of seven Asian countries for the period 1992-2011. To ensure robustness of the results, four different indicators of financial development were used. With the help of the panel estimation technique, the study concluded that financial deepening positively impacts on growth and domestic savings. In sum, the studies on the topic generally show positive relationship between financial deepening and savings mobilization though few studies have established ambiguity or negative relations, and has focused less on African countries. In addition, most of the studies employed bivariate causality tests which suffers from omission of relevant variables.
and therefore has not dealt with the problem of simultaneity and endogeneity of the explanatory variables. This study therefore fills the gap in the literature by employing a method of estimation (System GMM) that uses instrumental variables as well as lagged values of the explanatory variables. It is for this reason that this study becomes more relevant.

3.0 Methodology

This section explains the model specification, estimation strategy and the data used for the study.

Model Specification

In addressing this issue, we augment the life cycle model to include some key macroeconomic variables relevant to Africa and financial deepening indicators, consistent with Bayar (2014), and estimate the following empirical model:

$$ \text{DRM}_{i,t} = \alpha_0 + \alpha_1 \text{DRM}_{i,t-1} + \alpha_2 \text{FinDeep}_{i,t} + \beta X_{i,t} + \mu_i + \varepsilon_{i,t} $$

Where: DRM$_{i,t}$ (Domestic Resource Mobilization) denotes Gross Domestic Savings (GDS) as a percentage of GDP, FinDeep represents financial deepening which is proxied as broad money supply (M2) as a percentage of GDP and DCPS as a percentage of GDP, $X_{i,t}$ represents a vector of control variable which include economic growth measured by real per capita GDP growth, inflation which is a proxy to measure macroeconomic stability and prudent economic management, real interest rate and age dependency. $\varepsilon_{i,t}$ is the error term and $\mu_i$ is an unobserved country specific effect. The subscripts i and t represent country and time dimensions respectively.

Estimation Strategy:

In order to account for country specific unobserved characteristics and endogeneity, we use the system Generalized Method of Moments (GMM) dynamic panel estimation method developed by Blundell and Bond (1998). Development of the system GMM methodology is centered on the works of Hausman and Taylor (1981) but with inputs from Bhargava and Sargan (1983). The decision to use this method emanates stem from the fact that the presence of weak instruments has the potential to increase the variance of the coefficient and bias the results in situations where the sample is small. Also, the system GMM solves many estimation challenges since it is able to control for country-fixed effects in the error and the endogeneity of weak exogenous variables that may arise from possible simultaneity or reverse causality. The consistency of the system GMM technique is assessed with the help of the Sargan test and the autocorrelation test which tests for the validity of the instruments and examines the null hypothesis that the error term is not serially correlated respectively. Accepting the null hypothesis provides support to the model in both cases.

Data Sources:

The data for the study includes annual data for 42 countries in Africa for the period 1998–2015. The countries include Algeria, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cape Verde, Chad, Comoros, Congo Democratic Republic, Congo Republic, Cote D'Ivoire, Equatorial Guinea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Libya, Malawi, Mali, Mauritius, Mauritania, Mozambique, Morocco, Namibia, Niger, Nigeria, Rwanda, Senegal, Sierra Leone, Swaziland, Tanzania, Togo, Uganda, Zambia, Zimbabwe and South Africa. The dependent variable is Domestic Resource Mobilization, proxied as Gross Domestic Savings (GDS) which is measured as a percentage of GDP. The explanatory variables included measure of financial deepening as well as other macro indicators mostly used in savings determinant regressions found in the literature.

Two indicators of financial deepening were employed in the study. The first indicator is Broad money supply (M2) as a percentage of GDP (M2/GDP). The World Bank defines Broad Money as “the sum of currency outside banks, demand deposits other than those of the Central government, and the time, savings and foreign currency deposits of resident sectors other than the central government.” This measure has been employed in many studies such as Quartey (2008), King and Levine (1993), Beck et al. (2000) as the standard
measure of financial deepening and data is readily available (Quartey and Prah, 2008). The indicator has however been criticized as not being an entirely good proxy of financial depth because it measures the extent of monetization and countries with weak financial systems may have a high broad money to GDP ratio which may not measure financial depth, as money may be used as a store of value when there are no other alternatives (Luintel and Khan, 1999). A high broad money to GDP ratio is expected to increase domestic resource mobilisation proxied by GDS as a percentage of GDP, all other things being equal.

Because of the shortcomings in using M2/GDP as a measure of financial deepening, the study also used DCPS as a percentage of GDP which has been used in numerous studies such as Beck et al., (2000) and Quartey and Prah (2008). Private credit defined as the credit extended to private enterprises and households by commercial banks, emphasizes the important role played by the financial sector in financing the private economy and mostly used to assess the allocation of financial assets that M2/GDP cannot offer. Domestic Credit as a percentage of GDP (DCPS/GDP) shows a high level of domestic investments and consequently higher domestic resource mobilization. The sources of the data used is the World Development Indicator Online Database of the World Bank and the World Economic Outlook of the International Monetary Fund. Table 1 summarizes the variable definitions, expected sign and the source of empirical literature that justifies the use of the variable

**Table 1: Description, expected sign and justification of control variables**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Measurement/description and expected sign</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Real interest rate</td>
<td>Lending rate adjusted for inflation as measured by the GDP deflator. Higher interest rates through the substitution effect could lead to an increase in</td>
<td>Giovanni (1985), Wang et al., (2012) and Odhiambo</td>
</tr>
<tr>
<td>Economic growth</td>
<td>Growth in real per capita GDP. We expect that countries with higher economic growth rate will have higher savings rate compared with those with a relatively lower economic growth rate.</td>
<td>Loayza (2000) and Ang (2009)</td>
</tr>
<tr>
<td>Age Dependency</td>
<td>Number of dependents, aged zero to 14 and over the age of 65, to the total population, aged 15 to 64. Countries with higher dependency ratio will have lower savings rate.</td>
<td>Agenor and Aisenman (2004), Loayza et al., (2000), Kelley and Schmidt (1996:366)</td>
</tr>
<tr>
<td>Inflation</td>
<td>Annual growth rate of the consumer price index (CPI) in an economy. We expect that an economy with high inflation will have reduced savings.</td>
<td>Ilyas et al., (2014).</td>
</tr>
</tbody>
</table>

**Source:** Compiled by authors

**4.0 Empirical Results and Discussions**

Reported in Table 2, is the descriptive statistics of the variables used for the analysis. This includes the number of observations, mean standard deviation, minimum and maximum values. However, the benchmark for the analysis are the mean values.
Table 2: Summary of Descriptive Statistics of Data, 1998-2015

<table>
<thead>
<tr>
<th>Variables</th>
<th>Observations</th>
<th>Mean</th>
<th>Std.Dev.</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDS as a percentage of GDP</td>
<td>632</td>
<td>11.66312</td>
<td>25.32206</td>
<td>-152.5373</td>
<td>86.26893</td>
</tr>
<tr>
<td>Broad money as a percentage of GDP</td>
<td>596</td>
<td>31.86742</td>
<td>20.49846</td>
<td>0</td>
<td>151.5489</td>
</tr>
<tr>
<td>DCPS as a percentage of GDP</td>
<td>603</td>
<td>22.62048</td>
<td>29.68467</td>
<td>0.1982856</td>
<td>192.6601</td>
</tr>
<tr>
<td>GDP Per Capita Growth</td>
<td>664</td>
<td>2.236573</td>
<td>5.3928</td>
<td>-31.34253</td>
<td>57.99019</td>
</tr>
<tr>
<td>Real Interest Rates</td>
<td>403</td>
<td>13.56301</td>
<td>42.84174</td>
<td>-96.86984</td>
<td>572.9363</td>
</tr>
<tr>
<td>Inflation</td>
<td>669</td>
<td>8.733832</td>
<td>28.54048</td>
<td>-72.729</td>
<td>513.9069</td>
</tr>
<tr>
<td>Age Dependency Ratio</td>
<td>588</td>
<td>82.04031</td>
<td>14.05385</td>
<td>39.9614</td>
<td>105.971</td>
</tr>
</tbody>
</table>

**Source:** Authors’ computation with data from WDI, 2015; IMF, 2015 and WGI, 2015

The mean values measure the central tendency for the variables. Age dependency ratio had the largest mean value (82.04) while GDP per capita growth has the least. Clearly, the mean of GDS as a percentage of GDP and per capita GDP growth are very low, 11 and 2 respectively suggesting a low savings and GDP growth rate in the region in the midst of the financial liberalization. The standard deviation measures the dispersion with higher values of standard deviation indicating greater dispersion in the variable. Real interest rate has the largest dispersion with a standard deviation of 42.84.

**Empirical Result and Discussion:**

Table 3 presents the two step system GMM estimation results. Results of the AR (2) test which is relatively reliable and capable of detecting autocorrelation at these levels reports a p-value of 0.398 and 0.406 respectively for each model. This is greater than the conventional 0.05 benchmark. We therefore fail to reject the null hypothesis and conclude that there is no autocorrelation in variables used for the estimation, implying that the estimator is efficient. The Sargan test to ascertain the validity of the instruments is also insignificant at 0.05 indicating that the instruments used are valid.

The estimation results indicate that while Broad money to GDP ratio was positive and insignificant, DCPS as a percentage of GDP was negative but statistically significant. This result indicates that financial deepening has not stimulated domestic resource mobilization in Africa.
Table 3: Two Step System GMM Dynamic Panel Estimation Results (1998 – 2015)

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>(1)</th>
<th>(2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDS as a percentage of GDP</td>
<td>0.900*** (0.032)</td>
<td>0.917*** (0.020)</td>
</tr>
<tr>
<td>Lagged GDS as a percentage of GDP</td>
<td>0.023 (0.050)</td>
<td></td>
</tr>
<tr>
<td>Broad Money as a percentage of GDP</td>
<td>0.884*** (0.282)</td>
<td>0.328*** (0.055)</td>
</tr>
<tr>
<td>GDP Per Capita Growth</td>
<td>-0.819** (0.399)</td>
<td>-0.0893 (0.081)</td>
</tr>
<tr>
<td>Inflation</td>
<td>0.126 (0.100)</td>
<td>-0.0872* (0.051)</td>
</tr>
<tr>
<td>Age Dependency</td>
<td>-0.368** (0.149)</td>
<td>0.016 (0.019)</td>
</tr>
<tr>
<td>Real Interest Rate</td>
<td>0.030* (0.017)</td>
<td></td>
</tr>
<tr>
<td>DCPS as a percentage of GDP</td>
<td>-2.710 (7.596)</td>
<td>9.023** (3.962)</td>
</tr>
<tr>
<td>Constant</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Observations</td>
<td>297</td>
<td>293</td>
</tr>
<tr>
<td>Number of country code</td>
<td>32</td>
<td>33</td>
</tr>
<tr>
<td>Sargan Test (p-value)</td>
<td>1.000</td>
<td>0.652</td>
</tr>
<tr>
<td>AR(1) Test (p-value)</td>
<td>0.096</td>
<td>0.073</td>
</tr>
<tr>
<td>AR(2) Test (p-value)</td>
<td>0.398</td>
<td>0.406</td>
</tr>
</tbody>
</table>

Robust standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1

Notes: The robust standard errors are in parentheses. AR (1) and AR (2) is a test for first and second-order serial correlation, which is asymptotic N (0, 1) under the null of no second order serial correlation.

This result is consistent with the work of Loayza et al (2000) and Horioka and Yin (2010) who find a negative and insignificant relationship between financial development and GDS as a percentage of GDP but contradicts that of King and Levine (1993); Darrat (1999); Levine, Loayza and Beck (2000) that established a significantly positive relationship.

Several reasons could account for this occurrence. Africa has one of the lowest access to formal financial services compared to any developing region. According to a World Bank/IMF spring meeting report of 2016, in the African sub region for example, an average of about 24.1 percent have access to formal banking service. Nissanke and Aryeetey (1998) also argue that in Africa, the fragmented nature of financial markets and the high transaction costs acts as a disincentive in savings mobilization. Further, there have been few innovative savings instruments developed to attract...
the populace while the financial sector in some of the countries in Africa focuses mainly on the banking sector, making it difficult for the sector to generate domestic savings (Nissanke and Aryeetey, 1998). One notable observation made by Prasad et al., (2005) is that while the financial sector in some of the countries in Africa focuses mainly on the banking sector, making it difficult for the sector to generate domestic savings, others in developing countries such as South Asia, Latin America and East Asia have focus on all sectors of the financial sector making them more competitive and productive.

Aryeetey (2009) also argues that low income levels, large informal sector, long queuing time at the bank, wide geographical location of bank branches, minimum deposit requirements as well as huge infrastructural gaps play a significant role in the willingness of persons to save in the region. He further argued that, many financial systems in Africa are not efficient, in that, they are not able to better mobilize domestic resources while acting as an efficient intermediary.

A positively significant relationship exists between growth in per capita income and GDS as a percentage of GDP in both estimations. This result is consistent with the life cycle hypothesis and corroborate the work of Modigliani (1970), Loayza et al. (2001) and Ang (2010). This suggests that, the level of GDS as a percentage of GDP in the African region grows with an increase in per capita income. Thus, the Keynesian ‘Absolute Income Hypothesis’ holds for savings behavior in Africa.

The coefficient of Real Interest Rate is negative and significant in the first equation but insignificant in the second equation. Specifically, a unit increase in real interest rate will reduce GDS as a percentage of GDP by about 36 percent which is in contrast to the McKinnon and Shaw theory that savings positively depends on interest rate. This is where Keynes argument that savings depends more on income than interest rates becomes evident to some extent. The positive relationship between income and savings coupled with the negative relationship between real interest rate and savings suggest that savings in the region depends more on income rather than on real interest rate. Stated differently, if one does not have income to survive, no matter the interest rate they will not save. This is consistent with the findings of Giovanni (1985) and Odhiambo (2006).

The relationship between GDS (gross domestic savings) as a percentage of GDP and inflation showed a negative and significant impact in both estimations which is consistent with the findings of Ilyas et al., 2014). A coefficient of -0.819 implies that inflation impacts negatively on savings by about 81 percent across the region. This implies that, price increase allows people to pay more for goods and services which reduces their savings.

The age dependency ratio had a positive and insignificant effect on GDS as a percentage of GDP in the first estimation but negative and significant effect in the second equation. Thus, a coefficient of -0.0872 implies that an increase in the age dependency ratio significantly reduces GDS as a percentage of GDP by approximately 8.7 percent which is consistent with theoretical expectation and the work of Keho, (2011) and Bayar, (2014).

5.0 Conclusion and recommendation:

This study sought to investigate whether the deepening of the financial sector has stimulated domestic resource mobilization in terms of savings for a panel of 42 countries in Africa from 1998–2015. The system GMM estimation technique was applied to empirically analyse the life cycle model of savings and consumption. The research was motivated by the mixed evidence on the relationship between financial deepening and domestic savings mobilization.

The results from the study showed positive but insignificant relationship between broad money and domestic savings mobilization as proxied by gross domestic savings as a percentage of GDP) GDS in Africa. However, the impact of DCPS was negative and significant. Suggesting that financial deepening has not stimulated domestic resource mobilization in Africa. Also, growth in per capita income has a positive and significant impact on GDS which is
consistent with the life cycle theory while an increase in real interest rate negatively affects GDS. It must be recognized that the financial sector has the tendency to impact positively on savings with the right policies. Such policies should focus on reducing the cost of banking services to users. African banking systems are characterized by high real interest rates and high intermediation spread which creates a financial environment with prohibitive cost of loans which stifle savings, investment and growth. For instance, in 2014, the average real lending rate in Africa was 13% compared with an average of 3.5% in developed countries. Extending financial services to the rural areas through the provision of infrastructure such as roads, electricity, reduction in the minimum deposit requirements, extension of the geographical location of bank branches as well as the development of innovative financial instruments that will attract the large informal and other untapped segments of the financial systems. Policies to eliminate or reduce the minimum deposit requirement often set by the banks will make bunking unattainable for the poor. Reducing the fragmented nature of the market and the high transaction costs as well as balancing the dominance of the banking sector by focusing on other sectors other than the banking sector will go a long way to improve the efficiency of the sector and consequently, the ability of the sector to mobilize resources.

The positive effect of per capita income growth on savings implies that pursuing growth enhancing policies that could result in higher productivity is the best way to go. In the context of Africa, the emphasis should be on the addition of value to raw materials that are often exported as well as the adoption of technology to ensure efficiency in production.

The findings of a negative relationship between age dependency and savings suggests that there is a higher proportion of Africa’s population which can be part of the labour force which are unemployed. This can however be portrayed by the higher levels of unemployment across the regions. The negative relationship between savings and real interest rate implies that majority of African are net borrowers. This means that increase in interest rates will increase the cost of borrowing which will then have an inverse effect on savings. There is therefore the need for education on varied financial products and savings instruments.

References:

panel data models. Journal of econometrics, 87(1), 115-143.