

A Situational Analysis of Financial Deepening in Low, Middle and High Income Economies

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Abstract

Age long ago, financial deepening in economies have undergone revolutionary changes as a result of income level (high, medium or low) of economies. The purpose of this research study was to examine financial development strategies adopted by these economies- investigating an empirical retrospective relationship between financial deepening as a dependent variable and selected explanatory variables sought from the real sector (real GDP growth rates), financial variables such as; financial liberalization index and net financial account flows in the liberalized economies of Sierra Leone, Nigeria and South Korea as low, medium and high income countries respectively since 2000 to 2008 inclusive. We took Financial deepening, to refer to an increase in the volume of credit being intermediated in financial market measured by indicators such as; Money Supply (M2), factors that induce credit to the private sector or stock market capitalization relative to GDP, net capital flows and real growth rates. The Ordinary Least Squares and Multiple Regression model econometrics estimation technique were used employing Time Series data analysis to examine the causality to ascertain their impact whether stationary or not for the countries under review and a stochastic error term ' μ '. The empirical results suggest that financial sector development and economic growth are positively co-integrated and has an indication to stabilize long-run equilibrium relationship that exist within "bank-based" financial deepening determinants. The results generally support the view that, financial deepening is a necessary causal factor of economic growth, although the strength of the evidence varies across countries and proxies used in the study are observed as resultants parameters bench mark for policy implication.

Key words:

Situational analysis, financial deepening, financial development and economic growth.

1. INTRODUCTION

In the recent past decades, academic scholars, and financial analyst has proven that financial systems around the world have undergone revolutionary change with the truth that People and entities can borrow greater amount of funds at a cheaper rate and in a less cumbersome manner than ever before.

Joseph Shumpeter (1911), in his vision for a well-developed capitalist financial system, had emphasized the importance of the banking system in economic growth and highlighted circumstances when financial institutions could actively spur innovation for future growth by identifying and funding productive investment.

It is no doubt that, the fragile nature of the Sub-Saharan African financial sector cannot be separated from the still fragile state of most of their economies. The depressing economic performance of the region has been widely explained by a number of elements such as famine, drought and civil war. Infact even though agricultural productivity is the principal economic activity; the region only contributed about 2% of global trade in 2003 (Quartey 2006). Nevertheless, it is also recognized that there are other internal explanations for this, such as

the dysfunctional nature of financial markets and institutions. Sierra Leone is a case in point where the capital market is still in its embryonic state. Investments remain low in this region, limiting efforts to diversify economic structures and boost growth. When compared to other developing countries in South Asia, for example, the financial systems of the region show some distinctive features.

The Financial system of the Sub-Sahara region in general and Sierra Leone in particular consist of both the formal and informal financial Institutions. In most countries macro of the financial sectors mainly constitute the banking sector, large informal sector constituting other financial Institutions (OFIs), microfinance, micro credit Institutions and intensive black market participation in foreign exchange industry which is a recipe of foreign exchange market risk. Thus rendering the financial sector very fragile, thin and weak there by experiencing difficulty and challenges in mobilizing domestic savings and attracting and stimulating the demand of foreign private capital. As a matter of fact the banking sector is explicitly liberal with major foreign owned players. However, coupled with the aforesaid malaise that undermine the entire economy, the, financial sector is somehow uncompetitive, and credit allocation is often subject to stiff conditions. Since, most financial scholars and economists argue that growth depends on financial sector development. The relationship between financial deepening and the selected economic variables in the representative economies needed to be empirically determined. The focus was placed on the effects these financial variables had on the economy during normal times. In other words, excluding the period 2009 to date when the world economies experiences massive bail outs from their respective central banks that resulted to financial meltdown with followed consequences that may disagrees with normal times economic realities.

In the light of that, the general objective of the study focused to look at development in the financial sector, in terms of the selected variables, and critically compared them with those of the Nigeria and South Korea. As a middle income country, Nigeria happens to be not only the largest economy in West Africa but also play a major role in the financial sector of Sierra Leone. We attempted to compare these economies with a high income country as South Korea. South Korea happens to be not only one of the South-East Asian strongest economy but also among the four 'Asian Tigers'. So an empirical examination of the aforesaid data to discern their implications in the economies is very crucial. Findings and conclusion will attempt to present plausible economic recommendations for policy makers.

Statement of the research problem

Without being oblivious of the fact that, large proportion of the world's population is in the developing countries, it is evidently clear that, these economies are plague with serious inadequacies to move from such deplorable conditions to one of modernization with a sound financial system. Such obstacles come in the way of achieving a sound and well balanced financial system. Hence, the chosen variables - financial deepening, financial liberalization of the economy and down to the inflow and out flows of the financial capital accounts and the country's gross domestic products (GDP) - are no exception.

Moreover, the issues epitomized in the United Nations' Millennium Development Goal, financial development and economic growth programs are of a matter of pressing concern to the global community. In this perspective, the desire for developing countries to avoid over-dependence on aid and material support and to achieve well-balanced economic growth with long term sustainability cannot be over emphasized. Many researchers over the recent years have engaged and / or being engaging in the study of variety of developing economies' issues. These issues range from economic activities and legal systems to human resources, poverty and to issues of environmental protection. The above cited areas need to be considered when seeking ways for sustainable economic growth that would help eliminate poverty and preserve the earth's natural environment.

Despite the seeming recession of the 2008 global and European financial crisis some countries still witnessed relatively favorable economic conditions, especially in the developing countries. Two particular standouts are

the Asian giants of China and India, who continue to drive within a favorable economic climate.

However, these favorable conditions also saw some countries and regions that are yet to reap any benefits from economic growth and continue to live in extreme poverty. That's why; eliminating poverty especially in Africa in particular, has become a global concern. As it has been featuring prominently in most world economic and financial forum (IDE FY 2008). The deplorable conditions of these weak economies has been worsen by the impact of the United States subprime mortgage crisis and its resulted consequences, a dramatic inflationary situations in the recent past which were as a result of speculative investment, and subsequently to the global financial crisis. These malaises surrounding the global economy and its negative effects on poor and weak economies requires intense research to discern plausible causal reasons, and map out strategies as preventive measures for future reoccurrence. In that light, this work employed econometrics models, and focused on a comparative analysis between the selected economies to serve as proxies from which conclusions can be based for industrialised and non industrialised economies, as well as countries with similar economic structural characteristics using the index of financial deepening.

After 2008 however, the community of nations in the world evidently saw the emergence of a global financial crisis / meltdown. So inclusion of a country's post 2008 yearly economic or better still financial data may distort economic realities. Since most, if not all of the global economies experienced fluctuations (in most cases negative fluctuations) in the performance of their individual economies.

Objective

The purpose of this research study was to deduce a comparative evaluation of financial deepening between industrialized and non industrialized countries. The experiences of South Korea, Nigeria and Sierra Leone to serve as proxies for generalization of the wider picture of the economies within the above mentioned categories. Emphasizes were placed on reasons for the existence of unbalanced financial development and economic growth among these nations.

Research question

The relationship existing between financial development and economic development, considerably if not sharp heterogeneity still and / continues to exist among nations. To an extent that, one can't wait asking;

Q1. Whether, these undoubted innovative benefits are geared towards some countries and less to others? Q2.

What plausible reasons exist that may be responsible for such imbalances?

Q3. How concerned should governments, central bankers and financial system supervisor be, and what can they do to mitigate such disparities?

2. LITERATURE REVIEW

Theoretical literature

The late 20th Century witnessed the transformation of numerous centrally planned economies around the world to market systems. Economists have long been interested in the role of financial institutions in explaining economic transitions and growth. Studies have shown that, financial development facilitates economic growth by reducing the costs of external finance to firms.

Joseph Shumpeter (1911), in his vision for a well-developed capitalist financial system, had emphasized the importance of the banking system in economic growth and highlighted circumstances when financial institutions could actively spur innovation for future growth by identifying and funding productive investment.

Moreover, many economists also shown that, the development of financial institutions are essential for economic growth (as were cited in the works of Gurly and Shaw (1975), Patrick (1966), Goldsmith (1969), Mckinnon (1973), Shaw (1973), Levine (1991), King and Levine (1993a,b), Pagano (1993), and Beck et al. (2000).

Among other things, their arguments reveals that, such financial revolution has motivated people to invest in a multitude of instruments catering to every possible profile of risk and return, and share risks with say, strangers across the world during an era of financial globalization. In addition, there has been profound impact upon financial development giving rise to a group of closely intertwined international markets on which banks corporations, inter countries' trade ties or government agencies trade on an increasing amount of assets such as bonds, shares, or currencies.

Despite that also, in our modern day cutting edge technological world, transaction cost of accessing external funds has shrunk considerably, which can facilitate investment and market's free entry and exit. This is in consistent with the view that, well developed financial institutions can serve as incentives for development by surging the competitive pressure to innovate, mobilize savings to accumulate capital, and eventually induces further economic growth (Levine 1997, 2005).

In a market oriented economy, the financial sector has a special role, as it mobilizes resources (both domestic and foreign in the form of foreign Direct Investment), and allocates them to those investments that are capable of generating the highest returns on capital. Therefore, the more robust a financial sector can perform this role, the better the economy will perform both in the short and also in the long run.

In that light, many industrialized countries, especially the "Asian Tigers" have over the years achieved significant economic growth rates. Whilst most of the least developed economies, especially those in Sub Saharan Africa and Sierra Leone in particular are no doubt, trailed far behind in their economic strives. For example, during the period 1990 – 1999 total capitalization of stock market in Hong Kong, Malaysia, or Luxembourg exceeded 100% of GDP, whilst many developing countries did not provide firms with the possibilities of gaining access to equity finance by selling shares. Moreover, even within the Organization for Economic Cooperation and Development (OECD), during the same period, the largest credit market such as those of Japan or Switzerland granted 10 times more funds to their private sector than the least states like Turkey or Poland (Levine 1997, 2005)

However, in these industrialized economies, growth has not been sustainable. For example, the emergence of the Asian Financial Crisis in 1997 was clear cut evidence. The Asian financial turmoil in 1997 was in addition to existing problems of financial systems, especially when external and internal risk management and control systems failed to keep pace with the expansion of credit in the economy (APEC 2005). The credit crunch that engulfed the United States Housing market and its accompanied global financial meltdown and the current European financial turmoil saw nation states, including the world economic giant, the United States resolved in massive bail out programs to save the financial system. It is enough to say that, these crises exposed the weaknesses of the respective nations' financial systems during those periods.

These inadequacies however, drew and provoke researchers' interest to examine the source of economic development and the importance of financial development and stability to sustain economic growth.

On the other hand, most least developed economies reveals major deficiencies that render them unable to provide the coverage and extent of support required for the realization of their economies' growth potentials. These deficiencies pervade practically in every facet of the financial system of the selected economies. Such deficiencies, no doubt, can pose serious systemic threat on both financial system stability and overall economic development. Therefore, the importance of a robust, efficient, flexible and stable financial system that can rekindle growth and development that has been established in theory, and also through empirical investigation should be adhered to, so that weak economies can be saved from collapsing.

Empirical literature review

Kaminsky and Reinhart (1999) excessive risk-taking, increases macroeconomic volatility and leads to more frequent crises using a crisis index in a prohibit model to test whether banking and currency crises are more

likely to occur after Financial Liberalization. Nguena and Abimbola(2013) investigate the implication of financial deepening dynamics for financial policy coordination in the WAEMU sub-region adopted a hypothetical deductive theoretical approach and an empirical investigation in both static and dynamic panel data econometrics analysis. Philip Arestis and Paricos Demetriades(2012) 'financial liberalization can stimulate investment and growth' using the Barro growth regression econometric model.

3. METHODOLOGY

The research was aimed to examine, in greater depth, the financial development strategies employed by Sierra Leone, Nigeria and South Korea. How these strategies were optimally applied in these economies, which has over the years led to the country's successes, slow pace and/ or even failures in financial development and as well as the overall performance of the economy. The conclusion can be used to determine the potency of the countries' development with respect to the financial development strategies adopted. The conclusion reached can also be used as proxies for other countries, especially for those with similar economic characteristics. So that from now on, may serve as a strategic clue for economic growth, and also providing plausible reasons for the global imbalances in financial development and economic growth and its accompanied opportunities.

Financial deepening index were analyzed, as dependent variable for the period from 2000 to 2008 of the respective countries. The independent variables for the analysis were sought from the real sector (in the form of real GDP growth rates), financial variables, such as financial liberalization index and net financial account flows, and a stochastic error term.

Attention was focused on examining the relationship between financial deepening and the independent variables in determining the financial development trends and economic growth in South Korean, Nigeria and Sierra Leone for the period under review. For a realistic conclusion to be determined the author focused on the said variables and also examines their casual relationships using econometric estimation techniques to ascertain their impact on the country.

The comparative analysis of the represented countries' financial strategies was based on determining the relationship between variables of these counties under investigation. Data were sourced from financial development index statistics in data banks of the representative countries. This includes, World Bank, International Monetary Fund (IMF), International Financial Statistics (IFS), World Development Indicators (WDI), African Development Bank (ADB), Asian Development Bank (ADB), economic journals, text books and in depth use of online information. Further data were sourced from existing literature on financial development and economic growth. Apparent in most data in developing economies, is the tag of error that they carry. Such kind of errors may come as a result of human ineptitude and advertent or inadvertent reporting. For some

information that cannot be captured by statistical means, the use of the *error term*, μ estimator is crucial. Hence, regression models and other economic analysis software will neutralized such inadequacies and their eminence be adjusted. That notwithstanding, like many research in academia, time and resources (financial resources), are also some sought of constraints that may pose some obstacles in order to yield a desired effect within the given time frame.

These data sought above were based on yearly observations from 2000 to 2008. In order to produce a clear picture as desired. Therefore;

- (i) Financial deepening index as a function of economic growth rate to natural logarithm of GDP,
- (ii) The ratio of money supply (M_2) to GDP,
- (iii) The financial freedom index, and
- (iv) The net of capital inflows and capital out flows were determined.

The study determined the relationship between financial deepening as dependent variable and the independent variables mentioned above whether the time series were stationary or not. For that reason and further analytical evaluation, the time series were separated from all effects and the series became stationary.

The logarithm of the time series and Augmented Dickey Fuller (DF) test was used for testing the effect in terms of comparative differential of financial deepening index as a dependent variable and various independent variables mentioned above. For the time dependent lagged relationship between the three (3) economies. The variance (Var), and hence the standard deviation (SD) were used to discern the stability and instability of the countries' respective financial system.

There are many factors that can make the series stationary. In particular, seasonal effect, trends, shocks and so on can cause a stationary series. Time series should be separated from all these effects to make a correct evaluation with correct models. If series are still stationary, differences should be taken until series will be stationary at the same level. One important risk is losing the long term relationship possibility while taking differences to make stationary.

Empirical Model

A multiple regression model was used for analysis. Here, we extended the two- variable model by assuming that, the dependent variable, Y is a linear function of a series of independent variables, $X_0, X_1, X_2, \text{ and } X_3$ and $\dots \mu$, as an error term.

Hence, the model for the study is thus:

$$Y_{Sk} = \alpha_0 + \alpha_1 X_{1Sk} + \alpha_2 X_{2Sk} + \alpha_3 X_{3Sk} + \mu_{Sk}$$

$$Y_{Nig} = \beta_0 + \beta_1 X_{1Nig} + \beta_2 X_{2Nig} + \beta_3 X_{3Nig} + \mu_{Nig}$$

$$Y_{SL} = \theta_0 + \theta_1 X_{1SL} + \theta_2 X_{2SL} + \theta_3 X_{3SL} + \mu_{SL}$$

Also represented as thus;

$$FDI_{Sk} = \alpha_0 + \alpha_1 FFI_{Sk} + \alpha_2 \left(\frac{NCAF}{LogGDP} \right)_{Sk} + \alpha_3 RGR_{Sk} + \mu_{Sk}$$

$$FDI_{Nig} = \beta_0 + \beta_1 FFI_{Nig} + \beta_2 \left(\frac{NCAF}{LogGDP} \right)_{Nig} + \beta_3 RGR_{Nig} + \mu_{Nig}$$

$$FDI_{SL} = \theta_0 + \alpha_1 FFI_{SL} + \alpha_2 \left(\frac{NCAF}{LogGDP} \right)_{SL} + \alpha_3 RGR_{SL} + \mu_{SL}$$

Where;

Y= FDI= Financial Deepening Index
NCAF= Net Capital Flow
RGT= Real Growth Rate
GDP= Gross Domestic Product and
t= Time period

Where Y is the dependent variable, the X s are the explanatory variables, and μ is the stochastic term (error term). $X_{1Sk}, X_{2Sk}, \text{ and } X_{3Sk}$ are south Korean observations on the explanatory variables, and $X_0, X_1, X_2, \text{ and } X_3$ are the determinant of financial deepening. In other words, $X_{1Sk}, X_{2Sk}, \text{ and } X_{3Sk}$ are financial freedom index, net capital account flows and the real growth rate of the South Korean economy respectively. Similarly $X_{1Nig}, X_{2Nig}, \text{ and } X_{3Nig}$ represent the explanatory variables that determine the Financial Deepening Index in Nigeria's economy. Whilst, $X_{1SL}, X_{2SL}, \text{ and } X_{3SL}$ are the respective independent variables that influence the financial deepening index in the Sierra Leone economy.

$\alpha_0, \beta_0 \text{ \& } \theta_0$ are constant terms, or the intercepts of the equation of the respective country (South Korea, Nigeria & Sierra Leone). The author assumed that, the model is quite similar to a two-variable model in the scene that:

- the relationship between the dependent and the independent variables is linear,
- the independent variables are non stochastic, and that no exact linear relationship exist between them, and
- μ has zero expected value for all observations of the representative economies, a constant variance for all and uncorrelated error corresponding to the different observation and above all, μ is normally distributed.

The lag variable model was used to discern the trends and pattern of the financial development strategies adopted by the representative countries. The object was to see how the system regresses or progresses year in year out.

$$FDI_t - FDI_{t-1} = \alpha_0 + \alpha_1 [FFI_t - FFI_{t-1}] + \alpha_2 \left[\frac{NCAF}{LogGDP}_t - \frac{NCAF}{LogGDP}_{t-1} \right] + \alpha_3 [RGR_t - RGR_{t-1}]$$

$$FDI_t - FDI_{t-1} = \beta_0 + \beta_1 [FFI_t - FFI_{t-1}] + \beta_2 \left[\frac{NCAF}{LogGDP}_t - \frac{NCAF}{LogGDP}_{t-1} \right] + \beta_3 [RGR_t - RGR_{t-1}]$$

$$FDI_t - FDI_{t-1} = \theta_0 + \theta_1 [FFI_t - FFI_{t-1}] + \theta_2 \left[\frac{NCAF}{LogGDP}_t - \frac{NCAF}{LogGDP}_{t-1} \right] + \theta_3 [RGR_t - RGR_{t-1}]$$

Since one of the methods to test whether series is stationary or not is the Dickey Fuller (DF) (1979), and also because of the lagged terms of the dependent variable to the explanatory variables, the Generalized Dickey-Fuller (Augmented Dickey Fuller) was used. The analysis was conducted in three stages:

(a) Annual growth rates were estimated with regards to openness and soundness on an aggregate level using the ordinary least square (OLS) and multiple linear regression model (MRM), and observed the resultant parameters as bench mark for the conclusion reached. In this way, we were able to give indicative explanations, in terms of the economies' soundness or weakness for the period of study. Based on the above conclusion, suggestions for policy makers and futures research were put forward.

(b) More detailed issues about the factors that influence and / determine financial deepening and hence economic growth were also investigated. After a critical examination the potential constraints that arose from the weak financial economies' decision-making processes and the emerged variation among the selected countries, reason(s) for their growth pattern and plausible solutions for future opportunities for future economic recovery were suggested. Mindful of the cautiousness about trying to extrapolate regression models suite to a non-stationary data; we tried to stationarise the time series to be able to obtain meaningful sample statistics such as means, variances, and for correlations to exist within and among the variables for descriptions of future performance of the economy. Hence lag variables of the above model were used to discern the trends and pattern of the financial development strategies adopted by the representative economies.

4. EMPIRICAL ANALYSIS AND DISCUSSIONS

The regression results in figure A and B examines, in a broader terms, the simple correlation coefficients between financial deepening (as dependent variable) and the independent variables. The study uses financial freedom, net capital account flows and real GDP growth rates indexes as independent variables to determine their impact on financial deepening, and hence, the effect on economic growth rates of South Korea, Nigeria and Sierra Leone. To discern such determinants, we used the ordinary least square (OLS) regression techniques to estimate the relationship between the various exogenous variables and the dependent variables (financial deepening) in the representative countries. Based on the nature of the available data, and computed as follows;

Table A. Ordinary Least Square estimation result on

$Y_{Sk} = \alpha_0 + \alpha_1 x_{1Sk} + \alpha_2 x_{2Sk} + \alpha_3 x_{3Sk} + \mu_{Sk}$ $Y_{Nig} = \beta_0 + \beta_1 x_{1Nig} + \beta_2 x_{2Nig} + \beta_3 x_{3Nig} + \mu_{Nig}$ $Y_{SL} = \theta_0 + \theta_1 x_{1SL} + \theta_2 x_{2SL} + \theta_3 x_{3SL} + \mu_{SL}$					
Dependent Variable: Y, Method: Least Squares, Sample: 2000 - 2008 (Observation:9)					
Variable	Country	Coefficient	Std Error	t- Statistics	Prob.
X1	South Korea	1.386713	1.055706	1.313541	0.246
	Nigeria	0.756725	0.2456	3.081134	0.0274
	Sierra Leone	-2.456588	0.750975	-3.271198	0.0222
X2	South Korea	2.44E-06	5.17E-06	0.473086	0.6561
	Nigeria	-1.11E-05	7.57E-06	-1.469042	0.2018
	Sierra Leone	0.000155	0.000241	0.643966	0.548
X3	South Korea	-0.001987	0.004823	-0.412084	0.6973
	Nigeria	-0.009112	0.0112	-0.81355	0.4529
	Sierra Leone	-0.099612	0.038607	-2.580152	0.0494
C	South Korea	0.125201	0.548102	0.228427	0.8284
	Nigeria	-0.154747	0.090728	-1.70561	0.1488
	Sierra Leone	2.161601	0.418848	5.160827	0.0036

Source: computed from World Development Indicators, & Economics Trading Analytics, the World Bank, World Development Indicators 2007 | UNESCO Institute for Statistics | Stockholm International Peace Research Institute (SIPRI), Yearbook

Table B. Ordinary Least Square estimation result on

$Y_{Sk} = \alpha_0 + \alpha_1 x_{1Sk} + \alpha_2 x_{2Sk} + \alpha_3 x_{3Sk} + \mu_{Sk}$ $Y_{Nig} = \beta_0 + \beta_1 x_{1Nig} + \beta_2 x_{2Nig} + \beta_3 x_{3Nig} + \mu_{Nig}$ $Y_{SL} = \theta_0 + \theta_1 x_{1SL} + \theta_2 x_{2SL} + \theta_3 x_{3SL} + \mu_{SL}$				
Dependent Variable: Y, Method: Least Squares, Sample: 2000 - 2008 (Observation: 9)				
No.	Time Series Test Indicator	South Korea	Nigeria	Sierra Leone
1	R-squared	0.730356	0.699629	0.859505
2	Adjusted R-squared	0.56857	0.519406	0.775207
3	S.E. of regression	0.024992	0.030797	0.087954
4	Sum squared resid	0.003123	0.004742	0.03868
5	Log likelihood	23.07725	21.19756	11.75302
6	Durbin-Watson stat	1.707995	2.506154	2.228293
7	Mean dependent var	0.827556	0.084889	0.776844
8	S.D. dependent var	0.03805	0.044425	0.18551
9	Akaike info criterion	-4.23939	-3.821681	-1.722893
10	Schwarz criterion	-4.151734	-3.734025	-1.635238
11	F-statistic	4.514321	3.882024	10.19612
12	Prob(F-statistic)	0.069069	0.089204	0.014294

Source: computed from World Development Indicators, & Economics Trading Analytics, the World Bank, World Development Indicators 2007 | UNESCO Institute for Statistics | Stockholm International Peace Research Institute (SIPRI), Yearbook. The results obtained from the regression are presented in table A and B above. The overall performance of the model is satisfactory, with the coefficients correctly signed and the explanatory variables are statistically significant. In order to determine the impact of the variables, the results were grouped into three(3) general categories - the determinants of Financial Deepening in;

- (i) South Korea,
- (ii) Nigeria, and
- (iii) Sierra Leone.

Here we acknowledge the possibility of a linear relationship between financial liberalization, financial capitalization and real economic growth rate for the different economies. Since such process could induce multi-collinearity, we therefore entered the variables differently and the results in the tables A and B above are largely consistent with our expectations. It shows that;

(i) Financial liberalization is positively related to Financial deepening. This is consistent with most scholars' view on financial development and economic growth.

Financial liberalization has led to financial deepening and higher growth in several countries. However, it has also led to a greater incidence of financial crises. Here, we review the empirical evidence on these dual effects of financial liberalization across different groups of these countries. We then present a conceptual framework that explains why there is a trade-off between growth and incidence of crisis, and helps account for the cross country difference in the effects of financial liberalization.

Financial liberalization refers to the deregulation of domestic financial markets and the liberalization of the capital account. Its effects on the economy have been a matter of some debate. In one view, it strengthens financial development and contributes to higher long-run growth. In another view, it induces excessive risk-taking, increases macroeconomic volatility and leads to more frequent crises. The incidence of such crises can be measured by analyzing countries' financial histories and by codifying the occurrence of banking crises, currency crises, and sudden stops in capital inflows. Kaminsky and Reinhart (1999) use such a crisis index in a prohibit model to test whether banking and currency crises are more likely to occur after Financial Liberalization. Nonetheless, liberalization without fragility is best. The non existence of contract enforceability problems implies that liberalization can lead to higher growth. This is because it eases financial constraints but, as a by-product, it also induces financial fragility. However, because crises occur relatively rarely, Financial Liberalization to a very large extent have a positive net effect on long-run growth. This finding is consistent with the conclusion that 'financial liberalization can stimulate investment and growth' (Philip Arestis and Paricos Demetriades 2012).

In an attempt to examine the effect of financial deepening in terms of it trends and pattern during the year 2000 to 2008, table C and D reveals results of OLS estimation of the lag variables as thus;

Table C. OLS estimation on Lag Variables showing financial development trends for the sample: 2000 - 2008 with 8 observations

$FDI_t - FDI_{t-1} = \alpha_0 + \alpha_1 [FFI_t - FFI_{t-1}] + \alpha_2 \left[\frac{NCAF}{LogGDP}_t - \frac{NCAF}{LogGDP}_{t-1} \right] + \alpha_3 [RGR_t - RGR_{t-1}]$ $FDI_t - FDI_{t-1} = \beta_0 + \beta_1 [FFI_t - FFI_{t-1}] + \beta_2 \left[\frac{NCAF}{LogGDP}_t - \frac{NCAF}{LogGDP}_{t-1} \right] + \beta_3 [RGR_t - RGR_{t-1}]$ $FDI_t - FDI_{t-1} = \theta_0 + \theta_1 [FFI_t - FFI_{t-1}] + \theta_2 \left[\frac{NCAF}{LogGDP}_t - \frac{NCAF}{LogGDP}_{t-1} \right] + \theta_3 [RGR_t - RGR_{t-1}]$					
Variable	Country	Coefficient	Std Error	t- Statistics	Prob.
X1	South Korea	0.666419	0.619412	1.07589	0.3425
	Nigeria	0.020474	0.255556	0.080114	0.94
	Sierra Leone	0.129067	0.52812	0.244389	0.819
X2	South Korea	3.81E-07	3.03E-06	0.126035	0.9058
	Nigeria	-6.19E-08	7.05E-06	-0.008772	0.9934
	Sierra Leone	2.91E-05	0.000101	0.288767	0.7871
X3	South Korea	0.003043	0.00313	0.971987	0.3861
	Nigeria	-0.000343	0.00629	-0.054576	0.9591
	Sierra Leone	-0.039108	0.019109	-2.046557	0.1101
C	South Korea	0.011154	0.008838	1.262109	0.2755
	Nigeria	0.016399	0.010294	1.592979	0.1864
	Sierra Leone	-0.061149	0.01973	-3.099242	0.0362

Source: Computed from World Development Indicators, & Economics Trading Analytics,, IMF (International Financial Statistics) The World Bank, World Development Indicators 2007 | UNESCO Institute for Statistics | Stockholm International Peace Research Institute (SIPRI), Yearbook and Central Bank of Nigeria Annual Report & Economic Trading Analytics

Table D. OLS estimation on Lag Variables showing financial development trends

$FDI_t - FDI_{t-1} = \alpha_0 + \alpha_1 [FFI_t - FFI_{t-1}] + \alpha_2 \left[\frac{NCAF}{LogGDP}_t - \frac{NCAF}{LogGDP}_{t-1} \right] + \alpha_3 [RGR_t - RGR_{t-1}]$ $FDI_t - FDI_{t-1} = \beta_0 + \beta_1 [FFI_t - FFI_{t-1}] + \beta_2 \left[\frac{NCAF}{LogGDP}_t - \frac{NCAF}{LogGDP}_{t-1} \right] + \beta_3 [RGR_t - RGR_{t-1}]$ $FDI_t - FDI_{t-1} = \theta_0 + \theta_1 [FFI_t - FFI_{t-1}] + \theta_2 \left[\frac{NCAF}{LogGDP}_t - \frac{NCAF}{LogGDP}_{t-1} \right] + \theta_3 [RGR_t - RGR_{t-1}]$				
Dependent Variable: Y, Method: Least Squares, Sample: 2000 - 2008 (Observation: 8)				
No.	Time Series Test Indicator	South Korea	Nigeria	Sierra Leone
1	R-squared	0.582867	0.005051	0.61968
2	Adjusted R-squared	0.270018	-0.741161	0.33444
3	S.E. of regression	0.022934	0.027312	0.046769
4	Sum squared resid	0.002104	0.002984	0.00875
5	Log likelihood	21.62226	20.22458	15.92129
6	Durbin-Watson stat	1.044481	0.416033	1.759531
7	Mean dependent var	0.015912	0.016662	-0.068025
8	S.D. dependent var	0.026842	0.020698	0.057328
9	Akaike info criterion	-4.405565	-4.056145	-2.980322
10	Schwarz criterion	-4.365844	-4.016424	-2.940601
11	F-statistic	1.863091	0.006768	2.172487
12	Prob(F-statistic)	0.276573	0.999105	0.233903

Source: Computed from World Development Indicators, & Economics Trading Analytics,, IMF (International Financial Statistics) The World Bank, World Development Indicators 2007 | UNESCO Institute for Statistics | Stockholm International Peace Research Institute (SIPRI), Yearbook and Central Bank of Nigeria Annual Report & Economic Trading Analytics

The results in table 'C' also confirm that, the coefficients of the financial liberalization (X1) for all three economies (looking at the lagged values of the financial deepening function) are positive and are statistically significant as expected. This shows that, factors determining financial liberalization (say real interest rates, which may affect financial liberalization), unambiguously lead to financial deepening. This is consistent with the finding reached by Nicholas M. Odhiambo, 2005. In that study 'Financial Liberalization and Financial Deepening: Evidence from Three Sub-Saharan African (SSA) Countries', he concluded that, The deposit rate in the financial deepening function were found to be positive and statistically significant in Kenya, South Africa and Tanzania. The finding of this study lends more support for the positive role of financial deepening on economic growth in the study economies of South Korea, Nigeria and Sierra Leone.

(ii) Volatility with respect to financial liberalization can imposes high economic and social costs to every country participating in the system created by the financial globalization process, despite its particular situation. However, some countries have managed their insertion in such ways that they show more robust situations in their economies as well as in the international financial markets. In contrast, other important emerging markets countries found themselves caught in financial traps. Consistent with that, our result reveals that, both

$X_{2sk} > 0$ and also $X_{2sl} > 0$, but $X_{2Ng} < 0$. These indicate that in South Korea and Sierra Leone, there is positive relationship between financial deepening and net capital account inflow. On the other hand, Nigeria experienced a negative relationship between net capital account inflows and financial deepening during the period under consideration. The adjusted R- squared for the relationship between the dependents and the independent variables are greater than zero. In the lag variables, Nigeria's economy revealed a very low t-statistics, making it difficult for the indexes to suggest a very meaningful interpretation. However, the economies of South Korean and Sierra Leone registers positive adjusted R during the study period. This indicates that, there is evidence that, both in South Korea and Sierra Leone, there is at least one of the independent variables has a positive impact on the dependent variable. In other words, a linear relationship exists between all of the Xs variables considered and the Y variable. This revealed evidence that, at least the independent variable has effect on Y.

There is a consensus regarding the importance of prudential regulations. None the less, the conventional criteria for regulation are largely pro cyclical. Besides microeconomic risks, as well as prudential regulation should also consider the macroeconomic and systemic risks of mismatches in the currencies and the stockpiling of debt in foreign currency [Ocampo(2003)]. It is but necessary for the burden from prudential regulation be distributed beyond the recipient countries and needed to be shared by developed countries.

Better still, experience leaves no doubts as to the incompatibility between fixed exchange rates and the volatility of capital flows. Nevertheless, although there is consensus regarding the need for exchange rate flexibility, there is an open debate on the possibilities and benefits of intervening in the exchange market. The international monetary fund (IMF) advocates pure flotation and assigns all responsibility for price and exchange rate stability to monetary policy. A flexible exchange rate for example may discourages certain types of short term capital flows, but free floating in contexts of volatile capital flows can result in intolerable volatility in the nominal and real exchange rates. Besides, policies should never loose sight of the real exchange rate. Application of direct controls – or application of reserve requirements to the entry of capital can contribute to the stability of the exchange market and the capital flows, [Ffrench-Davis and Villar (2003)]. It can also influence the duration of inflows by discouraging short-term investments. Apart from its role as short-term stabilizer, the objective of regulatory policy is to harness capital inflows to turn their behavior into a stable and predictable flow.

(iii) Financial deepening which in other words refer to as the inverse of the broad-money velocity, that is, the ratio of broad money stock (M2) to nominal GDP have indirect robust relationship with real GDP growth rate. This measure, suggested by McKinnon (1973) and Shaw (1973), and recently used by King and Levine (1993a, b) is often called the monetization variable which could measure the size of the financial market or "financial depth." An increase in this variable indicates further expansion in the financial intermediary sector relative to the rest of the economy since it implies faster accumulation of a wide range of financial assets (primarily saving accounts). As is typical with any empirical measurement of economic phenomenon, this proposed proxy is not a "perfect" determinant of the degree of financial deepening.

Table A and B display the results of OLS estimation of various equations in South Korea, Nigeria and Sierra Leone respectively. It was observed that the real growth rate variable for all the representative countries have negative coefficients which are significant at 1% for each. That is to say financial deepening and economic growth are negatively related at the national level during the period of analysis. This indicates that when total bank deposits-to-GDP ratio increases by one percentage point, the country annual growth rate declines by approximately proportionate percentage points in those economies. Although this result may seem counter intuitive initially, it is important to reiterate that the period of analysis coincides with a period in which two of the representative countries, Nigeria and Sierra Leone experienced disincentive scenario. The former only saw a return to civilian rule only in 1999 after decades of military dictatorship. The latter was engulfed by eleven years civil conflict that seriously damaged the country's financial infrastructural facilities. The said civil war finally came to a halt in 2002 leaving the financial system weaken. Hence, such findings support the claims that, instability in a country may affect the rapid development of financial system as the banking sector may be vulnerable as a result of unregulated growth.

The R-squared, which gives a more accurate picture of the limitation of this model is greater than 0 (zero) in all of the three countries. Hence, most of the statistical results of the model are correct with a goodness of fit of the regression lines of each economy. The F-statistic and t- statistic are valid depicting a rationale for one to hold the view that, the model is correct and that all dependent variables are positively related to the dependent variable. Hence, the equation emerged as thus;

$$Y_{Sk} = 0.13 + 1.39x_{1Sk} + 2.44x_{2Sk} - 0.002x_{3Sk} + \mu_{Sk}$$

$$Y_{Nig} = -0.155 + 0.76x_{1Nig} - 1.11x_{2Nig} - 0.1x_{3Nig} + \mu_{Nig}$$

$$Y_{SL} = 2.16 - 2.46x_{1SL} - 0.0002x_{2SL} - 0.1x_{3SL} + \mu_{SL}$$

5. SUMMARY, CONCLUSION AND RECOMMENDATION

SUMMARY

South Korea is a fascinating case in that it combines the characteristics of sustained prosperity, capital controls. Pervasive capital controls, which de-linked South Korea's internal financial markets from the rest of the world, serve as a necessary component of the country's capital channeling development strategy. This strategy clearly was consistent with rapid and sustained economic development, though it may or may not have been causal. These interventions seem to have created domestic political groups for both their perpetuation and dissolution. The implementation of liberalization programs will reflect political competition among such groups. Transition is also affected by the demands of foreign financial services providers, which, having developed greater efficiency in a more competitive environment, regard the protected market as an opportunity. All of these phenomena are evident in the South Korean economy. From the literature and data analyzed, South Korea still battle with the difficult challenge, which is the legacy of financial repression. This is eminent both within the private sector actors and their public sector regulatory counterparts. South Korean authorities should take the bold step to successfully regulate the more complex financial system needed in liberalization. The strengthening of domestic financial institutions prior to opening the capital account is a staple of the sequencing literature, and South Korea in the late 1980s appeared to meet the basic preconditions for a successful transition, such as fiscal health (Edwards 1989). Similarly one can imagine a greater (or lesser) role for foreign financial service providers under a variety of institutional and regulatory constructs. Yet it is doubtful whether this could have been obtained in practice. It implies that, the South Korean government officials are yet to evince much ideological commitment to the notion of freer financial markets. In other words and more importantly, there were some very large and powerful interest groups that were opposed to liberalization. For better or worse, given the specifics of the South Korean situation, freer international capital flows, a less regulated domestic financial system. Therefore, an increased role for foreign financial service providers may probably not separable components of financial sector reform. The Nigerian financial sector has experienced some measures of governmental interventions that engineered transformations with far-reaching implications

on the sector's strength and survivability. Note that, her economy is the second largest behind South Africa and want to be the financial hub of West African economic community. These reasons actually motivated this paper to investigate her financial development strategies as against that of South Korea, which have an outstanding and spectacular financial system in the highly industrialized world. The investigation and suggestions proffer at the end of the day may go towards positioning the Nigerian commercial financial sector within the framework of the country's vision 2020. The study subjected data sourced from IMF, World Bank, Central Bank of Nigeria statistical bulletin and annual reports among others to regression techniques. The results from the study show that, financial liberalization has a significant positive influence on the degree of financial deepening. A greater percentage of the net capital account flows were negative for year in year out. This can transmit negatively to the overall financial sector. The study equally established that the real economic growth rates for the period under review are positive. Sierra Leone's financial system was undermined by prolonged economic and political instability, and the recovery process has been rather sluggish. The banking sector has gradually expanded, with 13 or more commercial banks operating in the country. However, government-owned banks still account for a majority of banking assets, and the government's frequent bond auctions tend to crowd out credit to other markets. Non-performing loans have stayed at over 20 percent of total loans in recent years. A considerable portion of the population remains outside the formal banking sector, and scarce access to credit is a major impediment to vibrant business activity. Poor enforcement of contracts discourages lending, and corruption is endemic. A substantial shadow market in United States dollars hinders efforts to combat money laundering. However, The Sierra Leone stock exchange has finally been launched since 2009. This clearly shows that, the financial sector is faced with many constraints and challenges to expand access to finance for the private sector development. The deficiencies pervade partially every facet of the financial system, and these may pose a serious systemic threat on both financial system stability and overall financial and economic development. The institutional framework for supervision is also in need of strengthening through the development of appropriate regulations, not only with respect to traditional financial activities but also to take into account new developments in the area of electronic banking and surveillance. The system is underdeveloped in terms of human capacity constraints and limited use of modern devices. Poor physical infrastructures including road networks and national land telephone grid, severely restrict their regional outreach, especially to some of the country's potential strong economic areas, and these inadequacies imposes further limitations on their efficiency. The capital market still remains embryonic, with the stock trading facility yet to become operational. Supporting institutions were still in their infancy or not yet established. There are also a number of dualities which impinge on the performance of the financial sector in Sierra Leone. Among them are; (i) those that relates to the significant level of currency substitution, or dollarisation, which entails the use of foreign currencies in preference to the national currency (the Leone) as transaction currencies, unit of account and store of value and (ii) there is also the extent of financial intermediation which occur outside the formal financial system and which caters especially for a large segment of the urban and rural populace that finds it difficult to access finance from the formal financial institutions. Their clientele and mode of operation put them outside the orbit of institutional monetary regulatory and supervisory arrangements. This situation makes it complicated for effective financial sector reform activities to take place.

CONCLUSION

Financial deepening as a positive step to economic growth and financial development is crucial because it has different implications for development policies. One could argue that, only in the case of supply-leading, policies should aim to financial sector liberalization; whereas in the case of demand-following, more emphasis should be placed on other real growth-enhancing policies. This study improves upon the existing literature by using econometric techniques that can allow us to test both hypotheses as well as to quantify their importance. Five

(5) interesting results are obtained from this study. First, financial development enhances economic growth for all the representative countries. This suggests that financial deepening in many countries has yielded the desired result - a more prosperous economy. Second, it has noted and discern proves that, financial depth stimulates growth and, simultaneously, growth propels financial development. The expansion of the real sector can significantly influence development of the financial sector, although this is more the case in developed economies. Third; the study reveals that, financial intermediaries have larger relative effects in less-developed and developing. Therefore, Sierra Leone and Nigeria have more rooms for financial and economic improvement than South Korea. Fourth: the longer the sampling interval, the stronger the effect of financial deepening on economic growth and financial development. This suggests that the impact of financial deepening on the real sector takes time. Fifth, we find that financial development may enhance economic growth through both more rapid capital accumulation and technological changes, though it appears that the productivity channel may be stronger in industrial economies than non industrial ones. The same result holds for capital accumulation. The empirical results suggest that financial sector development and economic growth is positively co-integrated indicating a stable long-run equilibrium relationship between “bank-based” financial deepening and economic growth. The findings also suggest that there is an indirect relationship between real growth rate and financial development through bank private sector credit and broad money. This means that high but sustainable economic growth would lead to financial deepening, and hence financial sector development. Also, a unidirectional relationship between financial deepening and economic growth exists running from financial deepening through loan deposit ratio and bank deposit liabilities to economic growth. This suggests that financial sector development would lead to high but sustainable economic growth.

POLICY RECOMMENDATIONS

The research study provides an empirical basis as a proxy for promoting financial deepening and economic development, and thus provides the following important policy implications, especially for Sierra Leone;

- (i) The country should make a strong effort to reform the financial sector, including the associated legal and accounting elements that should provide the basis for its operation, within the framework of a Financial sector Development Programme (FSDP), to be spearheaded by the Bank of Sierra Leone. This may lead to the creation of a sound, diversified, responsive and well-functioning financial system that would provide appropriate support for productive activities, thereby contributing to economic growth and poverty alleviation.
- (ii) The financial institutions need to employ the services of modernized equipment in order to improve efficiency and facilities adoption of techniques and modalities consistent with the latest financial industrial standards.
- (iii) To gain sustainable economic growth, it is desirable for both countries (Nigeria and Sierra Leone) to further undertake financial reforms.
- (iv) The country needs to take advantage of the positive interaction between financial deepening and economic development. That is, governments should liberalize their economy while liberalizing the financial sector. In other words, strategies that promote development in the real economy should be emphasized.
- (v) The financial sector needs to formulate policies and provide products that will specifically drive entrepreneurship and promote the development of indigenous small and medium sized enterprises in the private sector.
- (vi) The financial sector could spearhead the efforts of Government to attract investment and improve trade relations with the emerging economies of the BRICS (Brazil, Russia, India and China) and enhance south-south cooperation.
- (vii) The financial sector payment system in the country and switching mechanism need to be developed to facilitate increased use of electronic payment system, credit and debit cards, mobile and transfer, and

Automated Teller Machines (ATM), thus reducing the costly cash intensity of the economy. This can enable the banking sector of the country well prepared and effectively participate in a regional Real Time Cross Settlement system to transaction sufficiently smooth and cost effective.

LIMITATIONS

The fundamental studies about this research could be better improved by using more formal methods. Secondly, this study lack detailed theoretical analysis, since my analyses were principally based on empirical evidences and analysis. Fourthly, apparent also in most developing countries' research are some kind of error that may be committed. Such errors may come as a result of human ineptitude and advertent or inadvertent reporting. My research may not be free of such mishaps and lastly, notwithstanding the above, time and resources (financial resources), were also some sought of constraints that posed some obstacles in order to yield a desired effect within the given time frame.

SCOPE FOR FURTHER RESEARCH

Though the research study has proven financial deepening to have a positive functional relationship with economic growth in the represented countries yet much is also needed to be done in the concept of financial deepening and economic growth. Besides, the overall dynamics of financial deepening was not captured in this study hence; further researches on other factors associated with its revolution might yield more information which will be necessary in explaining the functional relationship existing between financial deepening and economic growth in countries economies.

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