



FINANCIALIZATION AND ECONOMIC GROWTH IN NIGERIA: A GRANGER CAUSALITY TEST

Muhammad Auwalu Haruna*

Abstract: *This paper empirically examined the direction of causality between the capital market impact of financialization and economic growth in Nigeria between 1986 and 2010 using composite indices (Value Traded Ratio and Turnover Ratio) as proxies for financialization, with GDP both at Constant Basic Prices and at Constant Purchasers' Prices as proxies for economic growth. Using a multivariate autoregressive model, the Granger Causality Test shows a bi-directional (two way) causality between capital market variables and the Real economy in Nigeria. This suggests financialization is not dominant possibly because it is at the rudimentary stage unlike the developed markets of Europe and United States of America. It is recommended that government policies should be directed at inducing the capital market development towards real growth rather than speculations, while exercising caution in integrating the Nigeria's financial system with the international markets.*

Keywords: *Financialization, capital market, economic growth, Granger causality*

*Department of Accounting, Faculty of Administration, Ahmadu Bello University Zaria,
Nigeria



I. INTRODUCTION

The financial markets in both developed and the developing economies witnessed dramatic growth over the last hundred years in both relative and absolute terms, with a number of causes and consequences, which can broadly be termed increased “financialization” of the economy (Orhangazi, 2007). In Nigeria, the 1970s and early 1980s witnessed a rapid increase in trading at the stock exchange, with increased participation of both individuals and institutions. At the full implementation of the liberalization, the performance of the capital market became the main attraction of investments away from the real sector. Banking portfolio became tilted towards a mode of financing known as Merging Accounts. When the burst came after the boom, the capital market slide with market activities witnessing considerable fluctuations just like the burst experienced in the real economy (Ologunla, 2008).

Financialization is a process whereby financial markets, financial institutions, and financial elites rather than the real sector, control economic policy and economic outcomes. It impacts the economy by elevating the significance of the financial sector (especially the capital market) relative to the real sector. It transfers income from the real sector to the financial sector and increases income inequality and wage stagnation. Consequently, there are possibilities that financialization may put the economy at risk of debt deflation and prolonged recession.

Financialization therefore, refers to the growing dominance of capital market (through an explosion of new financial instruments) over bank-based financial systems like Nigeria. Its defining feature is increase in the volume of debt especially long term debt sourced from the capital market. Thus, financialization raises public policy concerns at both the macroeconomic and microeconomic levels. At the macro level, it is associated with tepid and slow real economic growth associated with increased financial fragility (Palley, 2007).

Thus financialization of an economy should raise the following fundamental question: is the capital market evolving in response to the demand for its services (demand-following), or is the economic environment responding to the capital market (supply-leading)? In this regard, it is relevant to study causality to increase our understanding of the interdependence between the real sector and the financial system. The problem is not



whether the Nigerian economy should have a well developed capital exchange or not, but the degree to which government policy should aid its development.

Therefore, the purpose of this paper is to test for the direction of causality between the two basic variables, namely financialization and economic growth. The motivation for this study is that to best of the researcher's knowledge, the inter-relationships between financialization and economic growth have not been studied from a causality perspective in Nigeria. This study is therefore very topical in view of the capital market reform policy of the federal government.

The research is also important because the Nigerian stock market is yet to recover from a prolonged trough after the boom of the last few years as evidence by the decline in its capitalization over N13 trillion in 2007 to N5 trillion at the end of 2010 (NSE, 2011). The all-share index has also fallen from 57,990.22 points to approximately 25,000 points within the same time period.

Finally, this work is justified on the ground that previous studies on causality on Nigerian financial sector and economic growth (Aigbokan 1995, Mohamed 2003, Nnanna 2005) are based on the money market only. The work of Olugunla (2008) also was at the verge of the financial crisis. This work should provide more information to help the Nigerian policymakers in their efforts to accelerate the growth rate of the Nigerian economy.

The work is organized in five sections. Section two reviews some of the existing theoretical and empirical literature. Section three contains the methodology of the study. The data, the result and analysis there from are presented in section four. While conclusion, summary and recommendations of the study are contained in section five.

II. LITERATURE REVIEW

The interest of economists in the symbiosis between financial sector development and economic growth is an old phenomenon with the interest on the debate dating back to Schumpeter (1911). It is one of the most enduring debates in economics i.e. the question whether financial development causes economic growth or whether it is a consequence of increased economic activity. Schumpeter (1911) argued from the Supply-leading hypothesis that technological innovation is the force underlying long-run economic growth, and that



the cause of innovation is the financial sector's ability to extend credit to the entrepreneur (see also Hicks, 1969).

Mishel, Bernstein and Allegreto (2007) among others, argue that in the financialization thesis, changes in macroeconomic patterns and income distribution are significantly attributable to the financial sector developments. These developments increase access to finance and influence of the financial sector over the non-financial sector. For non-financial sector (households and firms), the condition lead to increased debts and changed behavior. This combined with changes in economic policy that have been supported by financial and non-financial business elites, the character and performance of the economy will likely change.

However, economists don't all seem to agree on the important role given to finance in promoting economic growth. From the Demand-following hypothesis, Robinson (1952) maintained that economic growth creates a demand for various types of financial services to which the financial system responds. He further questioned the importance of finance in the growth process and believes that financial development rather occurs as a result of economic development. This argument can be supported if we consider small scale financing needs in developing markets like Nigeria where cooperatives like "Dashi" and "Esusu" as devices or bridge for financing sources.

Palley (2007) further argued that there are serious reservations about the sustainability of the financialization process. The last two decades have been witnessed rapidly rising household debt-income ratios and corporate debt-equity ratios across industries. These developments explain both the patterns of business growth and increasing fragility, a clear indication of long-run unsustainability. The risk of extreme financialization of an economy will therefore be vulnerability to debt-deflation and prolonged recession.

Empirical investigations of the link between stock markets and economic growth in the developing economies are relatively limited. Tharavanji (2007) observed that countries with well developed capital market face less severe business cycle crisis hence lower chances of economic downturn. From the perspective of causality, Gursoy and Muslumov (1998), Luintel and Khan (1999) and Hondroyiannis et al (2005) confirmed a bidirectional causal relationship between stock market development and economic growth.



A number of subsequent studies (as cited in Olagunla, 2008: King and Levine, 1993, Atje and Jovanovic, 1993, Levine and Zervos, 1996, Harris, 1997, Levine and Zervos, 1998, and Levine, Loayza and Beck, 2000 among others), have adopted the growth regression framework to investigate this relationship, all of which face causality and/or unmeasured cross-country heterogeneity of the variables. Ologunla (2008) further stated that a number of techniques were adopted in an attempt to deal with these issues; which include (a) using only initial values of financial variables, (b) using instrumental variables, and (c) examining cross-industry variations in growth.

He further argued (while citing Carroll and Weil, 1994; Hess and Porter, 1993; Aigbokan, 1995; Odusola and Akinlo, 1995; Jin and Yu, 1995; and Darrat and Lopez, 1989) that Granger causality tests have been widely used in studies of financial markets as well as several studies of the determinants of economic growth. Luintel and Khan (1999) studied 10 developing economies and found bi-directional causality between financial development and economic growth in all the sampled countries.

In Nigeria, studies have shown that the stock market is not clear as a facilitator of economic growth. While, for instance, Adam and Sanni (2005) and Obamiro (2005) investigated the role of the Nigerian stock market in the light of economic growth and found a positive relationship, the outcome of researches by Nyong (1997), Osinubi and Amaghionyeodiwe (2003) and Ezeoha et al (2009) did not support the claim that stock market development always promotes economic growth.

There also exist extensive theoretical work on the relationship between financial development and economic growth. Levine and Zervos (1996) summarize the basic theoretical framework of the finance-growth nexus as follows: Financial markets purely exist due to market friction to facilitate effective resource allocation and risk management; thereby affecting growth through its two main channels, namely capital accumulation and technological innovation.

Earlier on the same line of reasoning, McKinnon (1973) and Shaw (1973) developed growth models where economic development was said to have been accelerated by financial liberalization and development. McKinnon (1973) also suggested access to a larger pool of



savings mobilized by the financial intermediaries facilitates bigger projects that would have been impossible to finance without financial liberalization.

The above debate points out that the issue cannot be settled satisfactorily without further empirical work. The obvious methodologies that are likely to give new insight, would be those based on causality analysis.

III. RESEARCH METHODOLOGY

In this study, the following hypotheses will be tested in conducting the Granger Causality Test:

- 1 H_0 : The Nigerian capital market does not Granger cause economic growth in Nigeria.
- 2 H_0 : Economic growth does not Granger cause the growth of the Nigerian capital market.
- 3 H_0 : There is no feedback (bi-directional) effect between economic growth and Nigerian capital market

The proxies employed are Financialization (FIN^{TN}) and gross domestic products (GDP) for the capital market and the economic growth respectively. Two types of causations are expected: unidirectional when H_1 in (1) and (2) are accepted; and bi-directional when H_1 in (3) is accepted. A priori from the analysis of Financialization, all H_{0s} should be accepted.

The Causality Test

Ordinarily, regressions reflect "mere" correlations, not causality. Granger (1969) argued that there is an interpretation of a set of tests that reveal something about causality. Thus, the Granger causality test is a statistical hypothesis test used in determining whether one time series is useful in forecasting another. This research is concerned with whether Financialization (FIN^{TN}) causes economic growth (GDP); so that preceding changes in FIN^{TN} can be used to forecast changes in GDP. To say " FIN^{TN} cause GDP" two conditions should be met

1. FIN^{TN} should help to predict GDP i.e. in a regression of GDP against past value of GDP, the addition of past values of FIN^{TN} as independent (or explanatory) variables should contribute significantly to the explanatory power of the regression.
2. GDP should not help to predict FIN^{TN} . The reason is that if FIN^{TN} helps to predict GDP and GDP helps to predict FIN^{TN} , it is likely that one or more other variables are in fact



“causing” the observed changes in both FIN^{TN} and GDP.

To evaluate whether each of the above two conditions holds the above null hypotheses are tested through the following models:

First: test the null hypothesis “ FIN^{TN} does not cause GDP” by running both unrestricted and restricted regressions:

$$GDP = \sum_{i=1}^m \alpha_i GDP_{t-i} + \sum_{i=1}^m \beta_i FIN^{TN}_{t-i} + \varepsilon_t \dots\dots\dots 3.1$$

$$GDP = \sum_{i=1}^m \alpha_i GDP_{t-i} + \varepsilon_t \dots\dots\dots 3.2$$

Second, test the null hypothesis “GDP does not cause FIN^{TN} ” i.e.

$$FIN^{TN} = \sum_{i=1}^m \alpha_i FIN^{TN}_{t-i} + \sum_{i=1}^m \beta_i GDP_{t-i} + \varepsilon_t \dots\dots\dots 3.3$$

$$FIN^{TN} = \sum_{i=1}^m \alpha_i FIN^{TN}_{t-i} + \varepsilon_t \dots\dots\dots 3.4$$

In all the models F tests are conducted to determine whether $\beta_1, \beta_2, \dots, \beta_m$ are significantly different from zero.

It is to be noted that: to conclude “ FIN^{TN} causes GDP”, we must reject the null hypothesis “ FIN^{TN} does not cause GDP” and also accept the null hypothesis “GDP does not cause FIN^{TN} ”.

This is the ideal situation, but it must also be noted that real life data do not always yield this result. What is achieved normally is by directional causation (i.e. FIN^{TN} causes GDP and GDP causes FIN^{TN}) or an inter-dependent situation in which no causation between FIN^{TN} and GDP.

Two other limitations are noted; first, it is possible that while other variable(s) are impacting GDP, might however be contemporaneously correlated with FIN^{TN} . This possibility gives room for further research. The second limitation is the choice of the number of lag length (m) in all the models. Ordinarily from practice, (m) is arbitrarily chosen at a few different values to make sure that the results are not sensitive to the choice of the number of lags.

However, in capital market research, consideration is given to the random walk (RW) theory that suggests zero lag length. That is in spite of psychological and behavioral hypothesis of



stock price determination popularized in the twenty first century, the random walk hypothesis remains the most consistent even from the recent global financial crisis.

The random walk is a financial theory stating that stock market prices evolve in an unpredictable manner consistent with the efficient-market hypothesis. “A blindfolded chimpanzee throwing darts at the Wall Street could select a portfolio that would do as well as the experts.” (Malkiel, 2003, p 2). Malkiel (2003) further asserts that neither technical analysis (which is the study of the past stock prices behavior in attempts to predict the future), nor analysis of current financial information (term fundamental analysis) could enhance returns on investments. Because of this random walk, investors cannot consistently outperform the market as a whole. Thus, applying fundamental analysis or technical analysis to time the market, is a waste of time that will simply lead to underperformance.

Given these two opposing views, the (m) range should be between 0 and 2 in order to accommodate the two strands of the literature. However, the least (m) on the statistical package is 1. So unlike Olagunla (2008), the possibility of a RW is acknowledging by starting with 1 lag length. Even though the expected memory of the capital market is not beyond 2 past periods, maximum $m=3$ is assumed. Investors hardly build their expectation on stock performance beyond the last two years.

The data used in this study covered the period of fully liberalized financial system and post-financial crisis stable state (i.e. 1986-2010). A priori, there are two expectations; first that financialization (through the liberalized Nigeria Stock Exchange) will affect economic growth in Nigeria through capital mobilization process and secondly, there will be a significant change between 2008 and 2010 if Financialization is significant. With GDP as a function of the Nigeria Capital Market, a prior economic theory suggests an increase in level of investment in the economy leads to more activities at the firm level thereby increasing level of activities on the capital market. Hence, the expectation is a positive feedback relationship between capital market and real Gross Domestic Product i.e. a bi-directional causation. However from the empirical literature, impact of Financialization suggests a booming capital market at the detriment of the real sector. This means the expectation is a bi-directional non-causation.



Econometric e-View package 7.0 is used for the causality test to determine the direction of causality in the model. That is whether the Nigeria capital market is truly performing the function of capital mobilization for investment to boost level of national output, or it is the growth in the economy GDP that is responsible for development of the capital market.

Model Specification

This study will apply Granger's causality model to investigate the direction of relationship between real and financial sector growth in the context of recent capital market reforms in Nigeria as typified by increased financialization of the market. These two hypotheses are tested below using the Grangers causality models captured by 3.5 and 3.6 econometric models.

$$GDP_t = \sum_{i=1}^n \alpha_{1i} GDP_{t-i} + \sum_{i=1}^n \beta_{1i} FIN^{TN}_{t-i} + \mu_t \dots\dots\dots 3.5$$

$$FIN^{TN}_t = \sum_{i=1}^n \alpha_{2i} FIN^{TN}_{t-i} + \sum_{i=1}^n \beta_{2i} GDP_{t-i} + \nu_t \dots\dots\dots 3.6$$

And testing i (where $i = 1, 2 \dots n$) to show whether or not FIN^{TN}_t fails to Granger cause GDP_t and vice-versa, respectively. The error terms are assumed to be serially independent with mean zero and finite covariance matrix. From equation (3.5) FIN^{TN} is said to Granger cause GDP if the coefficient of the lagged values of FIN^{TN} as a group (β_{1i}) is significantly different from zero, based on a standard F-test. The reverse is the case if (β_{2i}) is significantly different from zero from equation (3.6).

Feedback relationship or bi-directional causality occurs if FIN^{TN}_t Granger causes GDP_t and GDP_t Granger causes FIN^{TN}_t .

The above model shows that economic growth induced an expansion of the financial sector. That is growth in the real sector will generate demand for financial service with new financial services growing with the growth of the real sector. This is the demand-following hypothesis that $FIN^{TN} = f(GDP)$.

On the other hand, supply-leading hypothesis says that the growth of the financial sector precedes economic growth. The financial sectors mobilized and channels funds from savers to investors and thereby induce real sector growth. The deregulation of the financial sector



may have resulted from a belief in the supply-leading hypothesis. Therefore, this study is necessary to determine the extent and direction of causation.

The variables chosen for Financialization are a variant of Olagunla (2008) whereby two measures of GDP (basic price and purchasers price) are introduced in order to be more consistent with the objective of this research. The indicators used for financialization are composite indices comprising volume (size) and liquidity since the level of financialization is a function of volume and liquidity of capital market. Thus, the variables are captured in the specified pair-wise causality models as follows:

$$GDP_t = \sum_{i=1}^n \alpha_i GDP_{t-i} + \sum_{i=1}^n \beta_i MKT_{t-i} + \varepsilon_t \dots\dots\dots 3.7$$

$$MKT_t = \sum_{i=1}^n \alpha_i MKT_{t-i} + \sum_{i=1}^n \beta_i GDP_{t-i} + \varepsilon_t \dots\dots\dots 3.8$$

Similarly for the other variables the causality models are

$$GDP_t = \sum_{i=1}^n \alpha_i GDP_{t-i} + \sum_{i=1}^n \beta_i TOR_{t-i} + \varepsilon_t \dots\dots\dots 3.9$$

$$TOR_t = \sum_{i=1}^n \alpha_i TOR_{t-i} + \sum_{i=1}^n \beta_i GDP_{t-i} + \varepsilon_t \dots\dots\dots 3.10$$

$$GDP_t = \sum_{i=1}^n \alpha_i GDP_{t-i} + \sum_{i=1}^n \beta_i VTR_{t-i} + \varepsilon_t \dots\dots\dots 3.11$$

$$VTR_t = \sum_{i=1}^n \alpha_i VTR_{t-i} + \sum_{i=1}^n \beta_i GDP_{t-i} + \varepsilon_t \dots\dots\dots 3.12$$

Where;

GDP_t = Gross Domestic Product (in both constant basic prices and 1990 constant purchasers prices); at period t

MKT_t = Market Capitalization of Nigerian capital market at period t

TOR_t = Turnover Ratio at time t i.e. Value of Transaction relative to Total Market Capitalization.

VTR_t = Value Traded Ratio i.e. Value of Transaction/GDP



n = number of observations

e_t = error term which are assumed to be white-noise i.e. serially independent with zero mean and finite covariant matrix.

α and β are parameters to be estimated

$t-i$ is number of lags.

$i = 0, 1$ and 2 .

In Equations 3.7, 3.9 and 3.11, the two GDP measures (GDP@cpb and GDP@cpp) are related to their past values as well as past values of market capitalization. On the other hand equation 3.8 postulate that current market capitalization (as a proxy for growth in the capital market in term of size and depth of the market) is related to its past values as well as those of the GDP. Equations 3.10 and 3.13 are similarly explained in term of the other Financialization variables.

IV. DATA PRESENTATION AND DISCUSSION OF RESULTS

Data Presentation

TABLE 4.1 REAL ECONOMY AND CAPITAL MARKET INDICATORS FOR THE CAUSALITY TEST 1986-2007

	GDP@cbp (N' Million)	GDP@CPP (N' Million)	MKTCAP (N' Million)	VSHT (N' Million)	T O R	V T R_cbp	V T R_cpp
1986	205,971	244,333	7,700	498	6.4662	0.2417	0.2038
1987	204,807	218,063	8,900	382	4.2966	0.1867	0.1754
1988	219,876	234,510	9,700	250	2.5722	0.1135	0.1064
1989	236,730	249,677	12,000	653	5.4417	0.2758	0.2615
1990	267,550	281,550	15,900	306	1.9245	0.1144	0.1087
1991	265,379	279,811	22,600	225	0.9956	0.0848	0.0804
1992	271,366	281,024	32,500	492	1.5138	0.1813	0.1751
1993	274,833	286,899	41,800	662	1.5837	0.2409	0.2307
1994	275,451	289,509	65,500	986	1.5052	0.3579	0.3405
1995	281,407	288,619	171,100	1,839	1.0747	0.6534	0.6371
1996	293,745	303,032	285,600	6,980	2.4438	2.3761	2.3033
1997	302,022	311,523	292,000	10,331	3.5378	3.4204	3.3161
1998	310,890	319,983	263,300	13,571	5.1542	4.3652	4.2412
1999	312,183	321,501	299,900	14,072	4.6922	4.5076	4.377
2000	329,179	338,598	478,600	28,153	5.8824	8.5525	8.3146
2001	356,994	353,534	662,600	57,684	8.7057	16.1582	16.3163



2002	433,204	366,914	763,900	59,407	7.7768	13.7133	16.1909
2003	477,533	404,905	1,356,000	120,701	8.9012	25.2759	29.8096
2004	527,576	541,503	2,112,000	225,820	10.6922	42.8033	41.7025
2005	561,931	560,156	2,900,100	262,936	9.0664	46.7914	46.9398
2006	595,822	606,150	5,120,900	470,250	9.183	78.9246	77.5798
2007	634,251	633,027	13,295,000	2,001,000	15.0508	315.4902	316.1003
2008	672,203	647,794	9,560,000	2,400,000	25.1046	357.0352	370.4884
2009	718,977	594,169	7,030,000	685,720	9.7542	95.3744	115.4083
2010*	775,526	610,561	5,483,400*	534,862*	9.7542	68.9676	87.6017

Sources: CBN Statistical Bulletin 2010; NSE Fact Book various issues
column 5 and 6 computed by the
researcher.

NB:

$\text{TURNOVER RATIO} = (\text{Value Trade} / \text{Market Capitalization}) \times 100$

$\text{VALUE TRADED RATIO} = (\text{Value Traded} / \text{GDP}) \times 100$

*2010 is extrapolation

E-views 7.0 statistical package is used to generate the pair-wise Granger causality test and the results are presented in table 4.2 below. The lags indicate the number of years the past behavior of the variable is taken to have significant effect on the current period.



Results

Table 4.2: Causality Test Results

Pairwise Granger Causality Tests											
Sample: 1986 2010											
		Lags: 1				Lags: 2				Lags: 3	
Null Hypothesis:	Obs	F-Statistic	Prob.	Null Hypothesis:	Obs	F-Statistic	Prob.	Null Hypothesis:	Obs	F-Statistic	Prob.
MKTCAP does not Granger Cause GDP_CBP	24	1.09443	0.3074	MKTCAP does not Granger Cause GDP_CBP	23	0.09856	0.9066	MKTCAP does not Granger Cause GDP_CBP	22	0.07455	0.9727
GDP_CBP does not Granger Cause MKTCAP		5.96863	0.0235	GDP_CBP does not Granger Cause MKTCAP		5.58794	0.0129	GDP_CBP does not Granger Cause MKTCAP		4.38903	0.0209
TOR does not Granger Cause GDP_CBP	24	1.33924	0.2602	TOR does not Granger Cause GDP_CBP	23	1.53174	0.243	TOR does not Granger Cause GDP_CBP	22	1.51377	0.2516
GDP_CBP does not Granger Cause TOR		7.53985	0.0121	GDP_CBP does not Granger Cause TOR		5.54724	0.0133	GDP_CBP does not Granger Cause TOR		3.86888	0.0312
VTR_CBP does not Granger Cause GDP_CBP	24	0.59995	0.4472	VTR_CBP does not Granger Cause GDP_CBP	23	0.09678	0.9082	VTR_CBP does not Granger Cause GDP_CBP	22	0.06277	0.9787
GDP_CBP does not Granger Cause VTR_CBP		3.56572	0.0729	GDP_CBP does not Granger Cause VTR_CBP		9.39531	0.0016	GDP_CBP does not Granger Cause VTR_CBP		3.79425	0.0331
TOR does not Granger Cause MKTCAP	24	0.01053	0.9192	TOR does not Granger Cause MKTCAP	23	0.74789	0.4875	TOR does not Granger Cause MKTCAP	22	2.40519	0.108
MKTCAP does not Granger Cause TOR		14.5216	0.001	MKTCAP does not Granger Cause TOR		47.5021	7.00E-08	MKTCAP does not Granger Cause TOR		24.157	5.00E-06
VTR_CBP does not Granger Cause MKTCAP	24	3.44676	0.0775	VTR_CBP does not Granger Cause MKTCAP	23	105.755	1.00E-10	VTR_CBP does not Granger Cause MKTCAP	22	96.1406	5.00E-10
MKTCAP does not Granger Cause VTR_CBP		22.2323	0.0001	MKTCAP does not Granger Cause VTR_CBP		100.951	2.00E-10	MKTCAP does not Granger Cause VTR_CBP		36.7355	4.00E-07
VTR_CBP does not Granger Cause TOR	24	1.83476	0.19	VTR_CBP does not Granger Cause TOR	23	16.0737	0.0001	VTR_CBP does not Granger Cause TOR	22	25.9481	3.00E-06
TOR does not Granger Cause VTR_CBP		0.40085	0.5335	TOR does not Granger Cause VTR_CBP		6.43194	0.0078	TOR does not Granger Cause VTR_CBP		1.70219	0.2093
MKTCAP does not Granger Cause GDP_CPP	24	2.64576	0.1187	MKTCAP does not Granger Cause GDP_CPP	23	3.52372	0.0511	MKTCAP does not Granger Cause GDP_CPP	22	2.11398	0.1413
GDP_CPP does not Granger Cause MKTCAP		12.5178	0.0019	GDP_CPP does not Granger Cause MKTCAP		8.31855	0.0028	GDP_CPP does not Granger Cause MKTCAP		9.48917	0.0009
TOR does not Granger Cause GDP_CPP	24	1.48278	0.2368	TOR does not Granger Cause GDP_CPP	23	0.87566	0.4336	TOR does not Granger Cause GDP_CPP	22	2.28197	0.1209
GDP_CPP does not Granger Cause TOR		9.73058	0.0052	GDP_CPP does not Granger Cause TOR		4.68521	0.023	GDP_CPP does not Granger Cause TOR		2.06266	0.1483
VTR_CPP does not Granger Cause GDP_CPP	24	6.35721	0.0198	VTR_CPP does not Granger Cause GDP_CPP	23	3.12599	0.0683	VTR_CPP does not Granger Cause GDP_CPP	22	2.01997	0.1544
GDP_CPP does not Granger Cause VTR_CPP		7.59884	0.0118	GDP_CPP does not Granger Cause VTR_CPP		12.8855	0.0003	GDP_CPP does not Granger Cause VTR_CPP		10.0188	0.0007
TOR does not Granger Cause MKTCAP	24	0.01053	0.9192	TOR does not Granger Cause MKTCAP	23	0.74789	0.4875	TOR does not Granger Cause MKTCAP	22	2.40519	0.108
MKTCAP does not Granger Cause TOR		14.5216	0.001	MKTCAP does not Granger Cause TOR		47.5021	7.00E-08	MKTCAP does not Granger Cause TOR		24.157	5.00E-06
VTR_CPP does not Granger Cause MKTCAP	24	4.15941	0.0542	VTR_CPP does not Granger Cause MKTCAP	23	87.8137	5.00E-10	VTR_CPP does not Granger Cause MKTCAP	22	50.9539	4.00E-08
MKTCAP does not Granger Cause VTR_CPP		33.0585	1.00E-05	MKTCAP does not Granger Cause VTR_CPP		95.6582	3.00E-10	MKTCAP does not Granger Cause VTR_CPP		25.9167	3.00E-06
VTR_CPP does not Granger Cause TOR	24	1.4824	0.2369	VTR_CPP does not Granger Cause TOR	23	15.3347	0.0001	VTR_CPP does not Granger Cause TOR	22	25.471	4.00E-06
TOR does not Granger Cause VTR_CPP		0.27569	0.605	TOR does not Granger Cause VTR_CPP		6.27952	0.0085	TOR does not Granger Cause VTR_CPP		1.60572	0.2299

Source: Computed by the Researcher using e-Views 7.0

The decision rule is the probability value and the size of Granger's causality calculated F-statistic compared with the F-critical value at F(2:20), F(3 :19) and F(4:18) for lag 1, lag 2 and lag 3 respectively. If F- statistic is greater than F-critical value the null hypothesis H₀ of no causality will be rejected and the alternative hypothesis H₁ that there is causality accepted. The critical value at 5 per cent from F-table, for the three lags is presented below:

CRITICAL VALUE

Lags	5%
Lags 1 F(2:20)	3.49
Lags 2 F(3 :19)	3.13
Lags 3 F(4:18)	2.93



From table 4.2, there are twelve pair-wise causality tests which amount to twenty four null hypotheses tested. The result show a bi-directional (two way) causality between capital market variables and the Real economy in Nigeria, indicating simultaneity of Supply-leading and Demand following hypotheses. The null hypothesis MKTCAP does not Granger Cause GDP was rejected and the second null hypothesis, GDP does not Granger Cause MKTCAP was also rejected for the three different Lags considered as they were all associated with a very low probability level.

Considering the second pair-wise causality, Turnover Ratio (TOR) and GDP, the second indicator for capital market i.e. the liquidity indicator, there is also a bi-directional causality running between TOR and GDP for the lags examined except for the second lag where GDP does not Granger cause turnover ratio Thus, this also result from the tremendous increase in Turnover due to high reform exercise in the capital market. As large volume of shares are now traded due to bank recapitalization.

Similarly, VTR Granger Cause GDP and GDP Granger Cause VTR in all the three lag periods considered. But there is stronger causation from capital market to real economy. This result further reinforces the above bi-directional causation. Hence, indicating that there is a feedback mechanism from finance to real economy and real economy to finance eliminating significant impact of financialization.

V. CONCLUSION AND RECOMMENDATIONS

Conclusion

The study set out to empirically investigate spiral dynamics of influence exerted by financialization on economic growth and vice versa, using Granger causality model with annual time series covering the period 1986-2010. GDP as the proxy of economic growth was paired with financialization with proxies as Market Capitalization, turnover ratio and Value Traded Ratio.

The study started by carrying out of Granger casually test at second, third and fourth lag periods and the results showed that there is bi-directional (two way) causality between capital market variables and the Real economy in Nigeria, indicating simultaneity of Supply-leading and Demand-following hypotheses. This indication of feedback mechanism between capital market and the real economy suggests financialization is not intense possibly



because it is at the rudimentary stage unlike the developed markets of Europe and United States of America.

Recommendations

There is already empirical evidence that the consequence of financialization ultimately leads to negative growth through products and processes of the capital market. The outcome of this study indicates non-adverse causation possibly due to the rudimentary nature of the Nigerian capital market.

Nonetheless, to lessen the negative impact as the market develops, government policies should be directed at inducing the capital market development towards real growth rather than speculations. This can be achieved among other things, by putting policies in place to ensure designs of products and their derivatives are non-speculative.

Secondly, integrating the Nigeria's financial system with the international markets should be done with caution. The authority should bear in mind that the trickle-down effects in the international financial system exhibits lag-lengths whose manifestation might be beyond the memories of routine economic forecasts.

BIBLIOGRAPHY

1. Abdullahi, S. A. (2005). "Capital Market Performance and Economic Development in Nigeria: An Empirical Analysis". *Paper Presented at the Department of Business Administration, Bayero University Kano.*
2. Adam, J. A., & Sanni, I. (2005). "Stock Market Development and Nigeria's Economic Growth". *Journal of Economics and Allied Fields*, Vol. 2 No. 2, pp. 116-132.
3. Adjasi, C. K. D., & Biekpe, N. B. (2005). "Stock Market Development and Economic Growth: The Case of Selected African Countries". Working Paper, ADB.
4. Amaral, P., & Quintin, E. (2007). "Financial Intermediation and Economic Development: A Quantitative Assessment". *Journal of Money, Credit and Banking*
5. Arestis, P., Demetriades, P. and Luintel, K. (2001) "Financial Development and Economic Growth: The Role of Stock Markets", *Journal of Money, Credit and Banking*, 33(1), 16 - 41.
6. Atje, R., & Jovanovic, B. (1993). "Stock Markets and Development". *European Economic Review*, pp. 632-640.



7. Benchivenga, V. R., and Smith, B. D, (1991). "Financial Intermediation and Endogenous Growth", *The Review of Economic studies*, Vol. 58, pp. 195-209.
8. Bolbol, A., Fatheldin, A., & Omran, M. (2005). "Financial Development, Structure and Economic Growth: The Case of Egypt, 1974-2002". *Research in International Business Finance*, 19, pp. 171-194.
9. Chang, T., (2002) "Financial Development and Economic Growth in Mainland China: A Note on Testing Demand-Following or Supply-Leading Hypothesis", *Applied Economics Letters*, 9, 869 – 873.
10. Comincioli, B., (1996), "The Stock Market as a Leading Indicator: An Application of Granger Causality," *The Park Place Economist*: Vol. 4 Available at: <http://digitalcommons.iwu.edu/parkplace/vol4/iss1/13>
11. Deb S. G. and Mukherjee J., 2008. "Does Stock Market Development Cause Economic Growth? A Time Series Analysis for Indian Economy", *International Research Journal of Finance and Economics*, Issue 21, pp. 142-149.
12. Demetriades, Panicos and Khaled Hussein. (1996). "Does Financial Development Cause Economic Growth? Time-series Evidence from 16 Countries", *Journal of Development Economics* 51:387-411.
13. Dritsakis, N. and Adamopoulos, A., (2004), "Financial Development and Economic Growth in Greece: An Empirical Investigation with Granger Causality Analysis." http://users.uom.gr/~drits/publications/Financial_Development_and_Economic_Growth.pdf
14. Epstein, G. 2001. "Financialization, Rentier Interests, and Central Bank Policy," manuscript, Department of Economics, University of Massachusetts, Amherst, MA, December.
15. Ezeoha, A., Ebele, O., & Ndi Okereke, O. (2009). "Stock Market Development and Private Investment Growth in Nigeria". *Journal of Sustainable Development in Africa*, Vol.11, No.2.
16. Granger, C.W.J. and Newbold, P. (1986) "Forecasting Economic Time Series", *Academic Press, Inc.*, New York.



17. Gursoy, C. T. and Musumov, A (1998), 'Stock Markets and Economic Growth: a Causality Test, an article based on the MBA thesis of A. Muslumov supervised by Professor C.T. Gursoy, which was submitted to the Institute of Social Sciences, Istanbul Technical University in January 1998
18. Hondroyannis, G., Lolos, S, & Papapetrou, E. (2005). "Financial Market and Economic Growth in Greece, 1986-1999". *Journal of International Financial Markets, Institutions and Money*, 15, pp. 173-188.
19. Lavoie, M. 2007. "Financialization Issues in a Post Keynesian Stock-flow Consistent Model," paper presented at a conference on Finance-led Capitalism, in Berlin, Germany, sponsored by the Hans Boeckler Foundation, October 26-27.
20. Levine, R., (1996). "Stock Markets: A Spur to Economic Growth", *Finance and Development Division*, the World Bank's Policy Research Department.
21. Levine, R., (1997). "Financial Development and Economic Growth: Views and Agenda," *Journal of Economic Literature* XXXV, 688-726.
22. Levine, R., 2004. Finance and Growth: Theory and Evidence http://www.econ.brown.edu/fac/Ross_Levine/Publication/Forthcoming/Forth_Book_Durlauf_FinNGrowth.pdf Date of access: 26.01.2008
23. Levine, R. and Zervos, S. (1996), 'Stock Market Development and Long-Run Growth', *The World Bank Economic Review*, Vol 10(2), pp.323-339.
24. Levine, R. and Zervos, S. (1998). "Stock Markets, Banks, and Economic Growth", *American Economic Review* 88:537-558.
25. Luintel, K., and Khan, M. (1999). "A Quantitative Reassessment of the Finance-Growth Nexus: Evidence from a Multivariate VAR," *Journal of Development Economics* 60: 381-405.
26. Malkiel, B. G., (2003). The Efficient Market Hypothesis and Its Critics in *Journal of Economic Perspectives—Volume 17, Number 1—Winter 2003, Pages 59 – 82*. Retrieved from <http://www-stat.wharton.upenn.edu/~steele/Courses/434/434Context/EfficientMarket/malkiel.pdf> on March 20 2012



27. Mckinon, R. (1973), 'Money and Capital in Economic Development" (Washington, D.C.: The Brookings Institutions).
28. Mishel, L., J. Bernstein, and S. Allegreto. 2007. "The State of Working America 2006/2007", Ithaca, NY: Cornell University Press.
29. NSE Annual Report and Account. Various issues
30. Nurudeen, A., (2009), "Does Stock Market Development Raise Economic Growth?Evidence From Nigeria", *The Review of Finance and Banking* Volume 01, Issue 1, Year 2009, Pages 015—026 Sprint ISSN 2067-2713 online ISSN 2067-3825
31. Nyong, M. O. (1997). "Capital Market Development and Long-run Economic Growth: Theory, Evidence and Analysis". *First Bank Review*, pp. 13-38.
32. Obamiro, J. K. (2005). "Nigerian Economy: Growth and the Role of Stock Market". *Journal of Economic and Financial Studies* Vol. 2 No. 2.
33. Ologunla S. E. (2008), "The Nigeria's Experience with Capital Market Reform: Granger Causality Test of Supply-Leading and Demand-Following Hypotheses, (1986-2007)", *An M.Sc. Thesis Submitted to the Department Of Economics, Ahmadu Bello University, Zaria Nigeria.*
34. Osinubi, T. S., & Amaghionyeodiwe, L.A. (2003). "Stock Market Development and Long-run Growth in Nigeria". *Journal of African Business*, Vol. 4, No. 3, pp. 103-129.
35. Palley, T. I., (2007a) "Reviving Full Employment Policy: Challenging the Wall Street Paradigm," EPI Briefing Paper #191, Economic Policy Institute, Washington, D.C., June.
36. Palley, T. I., (2007b) "Financialization: What It Is and Why It Matters." *The Levy Economics Institute and Economics for Democratic and Open Societies* Washington, D.C. December 2007
37. Paudel, N. P. (2005). "Financial System and Economic Development, Nepal Rastra Bank in Fifty Years, Part –II", *Financial System*. Kathmandu: NRB.
38. Orhangazi O.(2007), Financialization and Capital Accumulation in the Non-Financial Corporate Sector: A Theoretical and Empirical Investigation on the U.S:1973-2003. Retrieved from www.generation.online.org/c/fcrent6.htm On 15th may, 2009



39. Rioja, F., and Neven, V. (2003). "Finance and the Sources of Growth at Various Stages of Economic Development", (Georgia State University, Department of Economics, Andrew Young School of Policy Studies).
40. Shan J., and Morris, A., (2002) "Does Financial Development Lead Economic Growth?" *International Review of Applied Economics*, 16(2), 153 - 168.
41. Shan, J., Morris, A., Sun, F., (2001) "Financial Development and Economic Growth: An Egg-and-Chicken Problem", *Review of International Economics*, 9(3), 443 - 454.
42. Shaw, E.S. (1973), *Financial Deepening in Economic Development* (New York: Oxford University Press).
43. Spears, A. (1991). "Financial Development and Economic Growth-Causality Tests", *Atlantic Economic Journal*, 19:66-74.
44. Stiglitz, J. E. (1985), 'Credit Markets and the Control of Capital' *Journal of Money, Credit and Banking*, Vol. 17(2), pp. 133-152.
45. Tharavanij, P. (2007). "Capital Market, Severity of Business Cycle, and Probability of Economic Downturn". *MPRA Paper No. 4953*.
46. Trabelsi, M. (2002). "Finance and Growth, Empirical Evidence from Developing Countries: 1960-1990", *Institut des Hautes Etudes Commerciales de Carthage (IHEC)*, Tunisia.
47. Victor O., (2005), "Does the Stock Market Matter in Ghana? A Granger-Causality Analysis" *Bank of Ghana Working Paper Series WP/BOG-2005/13*
http://www.bog.gov.gh/privatecontent/Publications/Staff_Working_Papers/2005/wp-13.pdf
48. Wachtel, P. (2002). "How Much Do We Really Know about Growth and Finance?", *Federal Reserve Bank of Atlanta Conference on Finance and Growth*.