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ABSTRACT: - The study investigated the impact of financial market development on the Nigerian economy. Based on growth theory and other empirical findings a model expressing gross domestic product GDP as a function of exchange rate (Exr), money supply growth rate (Msgr), market capitalisation (Mcap) and stock traded turnover ratio (Stck). Ordinary least square estimating technique is adopted particularly multiple regression analysis. The results show that market capitalisation and exchange rate have positive and significant impact on the growth of Nigerian economy. While inflation rate, money supply and stock traded turnover which is arguably seen to be a better indicator of stock market performance than market capitalisation. It appears that the gains from stock market have not been felt significantly in the Nigerian economy due to the non-significance of the stock traded turnover. It is recommended that effort is more geared toward development of the financial market by increasing more patronage so as to improve the impact on the Nigerian economy.

Keywords: Stock market, market capitalisation, economic growth

JEL Classifications: G11, G15 and G24

I. INTRODUCTION

The financial or stock market has become an essential market playing a vital role in economic prosperity by fostering capital formation and sustaining economic growth. Stock markets are more than a place to trade securities; they operate as a facilitator between savers and users of capital by means of pooling of funds, sharing risk, and transferring wealth. Stock markets are essential for economic growth as they ensure the flow of resources to the most productive investment opportunities. Somoye (2006) However, the one sidedness of the dominance in the activity chart of the Nigerian stock market by only the banking sector in the recent times seems not to follow the effective allocation and distribution of resources, a role that is supposed to be played by the capital market. Again, evidence from some developed economies shows that the capital market plays major roles in correcting and adjusting various macro economic disequilibra and fluctuations in these economies but in Nigeria despite the activities in the Nigerian capital market, the economy is continuously subjected to serious economic instability as a result of frequent fluctuation in major macro economic variables. Therefore, the roles played by capital markets in some developed countries as an inbuilt economic stabilizers” seems not to be evident in performance of the Nigerian capital market. Alade (2002) All these call for a critical appraisal of the role of Nigerian capital market in promotion of Nigerian economic growth.

In the report of IMF (2002) assessment of the performance of stock market in the developing countries was emphasized as a means of evolving policies that can transform the gains from their capital markets to overall economic development of these countries. The report further cited developed economies like U.S, United kingdom among others as countries that have effectively utilized the gains from their capital market for various developmental purposes. In fact major macro economic variables in these economies are influenced by stock market activities and are eventually used as in-built stabilizers to maintain economic stability.

Several studies have been conducted on the issues relating to stock market performance and economic growth. But a major controversy according to Livine(1996) is the inclusion of general measurement of stock market performance such as money supply, capital formation, public expenditure e.t.c rather than the core indicators of stock market performance such as market capitalization, turnover ratio, volume of transaction,
liquidity ratio, interest rate e.t.c. Investigation have revealed that many of the Nigerian research work such as Sunday(2009), Tokunbo(2002) among others all concentrated on general measurement rather than the core indicators of stock market performance. While research works like Hamid(2004), Muhammad(2008) among others focused more on the core indicators but they are all foreign researches. Livine(1996) further emphasized that the combination of both general and core indicators would pave way for a better appraisal of the stock market.

Consequently, this empirical study tries to explore the opportunity of making use of both general and core indicators of stock market development in examining the impact of the capital market on the growth of the Nigerian economy.

II. REVIEW OF EMPIRICAL FINDINGS

Hamid (2006) studied Stock Market Development and Economic Growth in Developing Countries. He actually examined the relationship between stock market development and economic growth for 21 emerging markets over 21 years, using a dynamic panel method. The Results suggested a positive relationship between several indicators of the stock market performance and economic growth both directly, as well as indirectly by boosting private investment behavior. Thus they lend support both to the financial intermediation literature as well as to the traditional growth literature.

Muhammad (2007) examined the causality between Stock Market Development and Economic Growth in Pakistan Contemporary economies of developing countries are changing due to rapid changes in the world economy. The emergence of international financial industry for worldwide network of transactions altered the role of international economy. Increased financial flows have altered the role of private capital and subsequently effect resource allocation. The economies of developing countries are witnessing changes in the composition of capital flows because world equity market is expanding rapidly. Foreign direct investment (FDIs) and stock market boom are the indicators of the changing world economic order. Earlier, most of the developing nations were facing serious liquidity problems thus compromising economic growth. Now, it is important to study how the changes in financial sector contributed in the overall growth of the economy. This paper endeavors to investigate whether there is a relationship between stock market development and economic growth in case of developing economy such as Pakistan. The data set covers annual times series data from 1971 to 2006. We employed two new tests, i.e., DF-GLS, and Ng-Perron to find integrating order of the said variables of the study. To test long-run robustness, J-J Co-integration and ARDL bounds testing techniques are applied. To investigate long-run causal linkages and short-run dynamics, Engle-Granger causality and ARDL tests are applied respectively. After finding order of integration, our findings suggested that there exist a very strong relationship between stock market development and economic growth. Granger- Causality estimation confirms in the long-run, there is bi-directional causality between stock market development and economic growth. However, for short-run, there exist only one-way causality, i.e., from stock market development to economic growth.

G.rosy(2002) assessed the causality relationships between stock markets and economic growth based on the time series data compiled from 20 countries for the years 1981 through 1994. SimsÔ causality test based on Granger definition of causality was used. At first, panel data covering all countries over the entire analysis period were used to detect the direction of causation. Secondly, causal relations were investigated for each country, in isolation, using the respective time series data. Analysis based on the panel data revealed a two-way causation between stock market development and economic growth. Country analyses, on the other hand, could not lead to precise conclusions, but suggested a somewhat stronger link between stock market development and economic growth in developing countries.

Levine and Zervos (1996) examined whether there is a strong empirical association between stock market development and long-run economic growth. The study used pooled cross-country time-series regression of forty-one countries from 1976 to 1993 to evaluate this association. The study tow the line of Demirgüç-Kunt and Levine (1996) by conglomerating measures such as stock market size, liquidity, and integration with world markets, into index of stock market development. The growth rate of Gross Domestic Product (GDP) per capita was regressed on a variety of variables designed to control for initial conditions, political stability, investment in human capital, and macroeconomic conditions; and then include the conglomerated index of stock market development. The finding was that a strong correlation between overall stock market development and long-run economic growth exist. This means that the result is consistent with the theories that imply a positive relationship between stock market development and economic growth.

Efforts were also made by Nyong (1997) to develop an aggregate index of capital market development and use it to determine its relationship with long-run economic growth in Nigeria. The study employed a time series data from 1970 to 1994. For measures of capital market development the ratio of market capitalization to GDP (in percentage), the ratio of total value of transactions on the main stock exchange to GDP (in percentage),

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the value of equities transaction relative to GDP and listings were used. The four measures were combined into one overall composite index of capital market development using principal component analysis. A measure of financial market depth (which is the ratio of broad money to stock of money to GDP) was also included as control. The result of the study was that capital market development is negatively and significantly correlated with long-run growth in Nigeria. The result also showed that there exists bi-directional causality between capital market development and economic growth.

Tokunbo (2006) examined if Stock Market Promote Economic Growth In Nigeria. The stock market is a common feature of a modern economy and it is reputed to perform some necessary functions, which promote the growth and development of the economy. This study examines whether stock market promotes economic growth in Nigeria. To achieve this objective, ordinary least squares regression (OLS) was employed using the data from 1980 to 2000. The results indicated that there is a positive relationship between growth and all the stock market development variables used. With 99 percent R-squared and 98 percent adjusted R-squared, the result showed that economic growth in Nigeria is adequately explained by the model for the period between 1980 and 2000. By implications 98 percent of the variation in the growth of economic activities is explained by the independent variables. The results of the study, which established positive links between the stock market and economic growth, suggests the pursuit of policies geared towards rapid development of the stock market. Also, all sectors of the economy should act in a collaborative manner such that the optimum benefits of linkages between stock market and economic growth can be realized in Nigeria.

Sunday (2008) conducted an appraisal of the impact of capital market efficiency on economic growth in Nigeria, using time series data on market capitalization, money supply, interest rate, total market transaction and government development stock that ranges between 1961 to 2004. The model specification for the analysis of data is multiple regression and ordinary least squares estimation techniques. The result of the study shows that the capital market in Nigeria has the potentials of growth inducing, but it has not contributed meaningfully to the economic growth of Nigeria. This is as a result of low market capitalization, low absorptive capitalization, illiquidity, misappropriation of funds among others. The empirical test indicates that, these variables satisfied the economic apriori and are statistically significant except total transactions and money. Thus it was concluded and recommended that, the capital market remain one of the mainstream in every economy that has the power to influence economic growth, hence the organize private sector is encourage to invest in it. This will enable the capital market improve its illiquidity status for economic growth and development. Therefore the government must contribute in order to achieve these objectives through investing government securities in productive sectors and relaxing laws that spell threat to the capital market.

Abel (2007) empirically verified and examined the nature of the relationship existing between stock market development and the level of investment flows in a country with a high degree of macroeconomic instability; and whether the stock market plays a uniform role in attracting both domestic and foreign investments in such economic situation. Exrpolated macroeconomic quarterly data (over a period from 1970 to 2006) are used in the analysis. The Johansen Cointegration model is adopted to examine the long-run trends in the variables. While controlling for other variables, a vector error correction model (VERCM) is used in estimating the relationship between investment growth, on one hand, and stock market development on the other. The study shows that development in the Nigerian stock market over the years was able to spur growth in domestic private investment flows, but unable to do so in the case of foreign private investment; and that development in the country’s banking system rather had some distabilising effects on the flow of private investments. The researchers attributed this to persistent cases of distress and failure in the banking system. This study is among the few of its kind to have empirically sort for and established some discriminant effects of stock market development in the flow of domestic and foreign private investments, at least from the point of view of a constrained market economy.

Ologunde etal(2008) examined the relationships between stock market capitalization rate and interest rate. Time series data obtained from Central Bank of Nigeria (CBN) and Nigeria Stock Exchange (NSE) were analyzed using regression. Results showed that the prevailing interest rate exerts positive influence on stock market capitalization rate. Government development stock rate exerts negative influence on stock market capitalization rate and prevailing interest rate exerts negative influence on government development stock rate. The study further revealed information as very important to capital market development. It was therefore recommended that the operators of the Nigeria capital market should raise the level of awareness so that investors will be abreast with the happenings in the market.

III. METHODOLOGY

To establish the relationship between the stock market, a subject of the capital market and economic growth in Nigeria an empirical model captures financial market development and the effect of macro economic variable on its activities is specified as

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The model to be estimated is stated thus:
\[ \text{lgdp} = f(\text{inf}, \text{exr}, \text{msgr}, \text{lmcap}, \text{stck}) \] ........................................4.1

In linear form the equation is:
\[ \text{lgdp} = \alpha_0 + \alpha_1 \text{inf} + \alpha_2 \text{exr} + \alpha_3 \text{msgr} + \alpha_4 \text{lmcap} + \alpha_5 \text{stck} + u_i \] ..............4.2

Where: Gross domestic product

Exr is exchange rate
Msgr: money supply growth rate
Mcap: market capitalisation
Stck: stock traded turnover ratio
Infr: Inflation rate

\[ \beta_0 = \text{Intercept} \]
\[ U = \text{Error term} \]

3.6 ESTIMATION TECHNIQUES

This study adopts both descriptive and linear regression analysis.

Descriptive Analysis: Summary of statistics which include the mean, median and standard deviation of the data will be explored. Again the correlation matrix will also be examined to enable us ascertain the pattern of distribution of the data. Finally, Bar Chart will be used to compare the summary of statistics.

Regression Analysis: The estimating technique adopted for this research work is the Ordinary Least Square Estimating technique, precisely the multiple regression version. Two models are employed in order to empirically investigate the impact of government expenditure on education in Nigeria. The ordinary least square (OLS) method of multiple regression is adopted because the OLS appears appropriate as it yields estimator which are best linear, um-biased and efficient. The following are the reasons for employing the OLS method.

1. The mechanisms of OLS are easy to understand
2. The OLS interpretation procedure is fairly simple.
3. The OLS has been used in a wide range of economic relationship with fairly satisfactory results and
4. The OLS is an essential component of most other econometric techniques.

Following the model in equation 3.3 where all the variables are as previously defined, a number of standard assumptions are made about the error term or the stochastic variable, some of which are stated thus:

(i) The error term is a random variable whose summation equal to Zero i.e. \( U_i = O \), that is to say that the value which it may assume in any one period depends on chance, this could be normality: thus implies that the error term \((U_i)\) is normally and systematically distributed around its mean.

(ii) Hanosk elasticity: this implies that the variances of the error term is a constant with an unknown value, i.e. the parameter estimates which is \( \beta_1 \) to \( \beta_7 \) are estimated using the stata 11 econometric software. The standard error R square value and the t statistic value and their P values are also computed by the same software stata 11.

The R square shows the variation in exchange rate that is explained by the identified determinants. The \( R^2 \) which is the square of correlation co-efficient or as it popularly known as the co-efficient of determination will show the percentage of the total variation of the dependant various being explained by the changes of the explanatory variables. It measures the goodness of fit of the model i.e., it measures the extent to which the explanatory variables are responsible for the changes in the dependent variable. The standard error test which is a measure of the dispersion of the estimates around the true parameter will be carried out, this judges the reliability or significance of the estimates, of the regression co-efficient i.e. the parameter estimates. The standard “t” ration performs the same function with the standard error test but given due consideration to the level of significance which are traditionally 95% and 99% level.

Again the validity of the model used in this study can be tested by conducting the ‘F’ test, which describes the overall significance of the model; it would also be used in this study. Tests shall basically be econometric in nature, which also extends to the test for presence of multicollinearity. This is the consideration of the co-efficient of determination “R” and correlation co-efficient ‘r’ if \( r \geq R^2 \), it means there is problem of multicollinearity which means that the explanatory variables are correlated.

SOURCES OF DATA

This study uses of secondary data and will be extracted from Central Bank of Nigeria – Statistical bulletin (2012) edition and other relevant Journals/Publications. World bank data table will also be of immense advantage in sourcing for the needed data.
IV. RESULT AND DISCUSSION

This section of the study presents that empirical result and interpretation of the results are also made. However, basic inferences are also drawn from the findings. As the major objectives of this study is to assess the impact of stock exchange development on Nigeria economic growth. This is done through the ordinary least square estimating technique.

The data used for the study are first normalized so as to yield a meaningful result. Consequently, data like gross domestic product (gdp) and market capitalization (mcap) are logged so as to normalize them with other variables such as exchange rate(exr), inflation rate(inf), stock turnover ratio(stck) and money supply growth rate (msgr).

4.1 Representation of the Model

The model to be estimated is stated thus:

$$\ln gdp = f(inf, exr, mgrp, lnmcap, stck)$$ ..............................................................4.1

In linear form the equation is:

$$\ln gdp = \alpha_0 + \alpha_1 inf + \alpha_2 exr + \alpha_3 mgrp + \alpha_4 lnmcap + \alpha_5 stck + u_i.$$ ..............................................................4.2

Note that: halve log was used so as to normalize the regression equation.

4.2 The Regression Results

Table 1 Regression equation for lgdp log of gross domestic product (proxy for economic growth)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coefficient</th>
<th>Standard Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inf</td>
<td>.0045315</td>
<td>.0063867</td>
</tr>
<tr>
<td>Exr</td>
<td>.0123137**</td>
<td>.0036575</td>
</tr>
<tr>
<td>Msgr</td>
<td>-.0273363</td>
<td>.0211517</td>
</tr>
<tr>
<td>Lmcap</td>
<td>.7225841**</td>
<td>.200613</td>
</tr>
<tr>
<td>Stck</td>
<td>-.0086232</td>
<td>.0263366</td>
</tr>
<tr>
<td>Constant</td>
<td>-1.588218</td>
<td>4.2382</td>
</tr>
</tbody>
</table>

R² = 0.93  F( 5, 16) = 40.12***,  Prob > F = 0.0000

*** Statistical significance at 1%, ** Statistical significance at 5%,

Source: Authors Computation

Table 1 shows the result of the regression for the model. It explains the empirical relationship between gross domestic product and and other independent variables such as market capitalization (mcap), exchange rate(exr), inflation rate(inf), stock turnover ratio(stck) and money supply growth rate (msgr).

From the table, the relationship between inflation rate and gross domestic product also money supply growth rate is inversely related to the gdp again the relationship is not significant. Similarly, stock turnover ratio shows a negative relationship but also not significant. However, the only two variables that have significant impact on the gdp are market capitalization and exchange rate. Considering the two major variables of interest namely: market capitalization and stock turnover ratio. The coefficient of market capitalization is 0.722581. This is a positive value which shows that there exists a direct relationship between market capitalization and the gross domestic product. Again the test of the coefficient statistical significance is an indication the market capitalization coefficient is significant at 5% level. The implication of this result is that a unit increase in market capitalization will lead to about 72% rise in the gross domestic product.

However, the second variable of interest which is the stock traded turnover ratio. Note that this refers to total volume of stock traded divided by the average market capitalization. This is a better indicator of stock market growth rate Somoye (2004). The result from the study shows that the coefficient is negative again it is not even statistically significant.

The result further shows that the R square is about 0.92. This is an indication that about 92% variation in economic growth proxied with gdp is explained by the independent variables that is market capitalization (mcap), exchange rate(exr), inflation rate(inf), stock turnover ratio(stck) and money supply growth rate (msgr). The value of F statistics is 40.22. The value is also statistically significant at 1% level. This shows that the model is statistically significant and we can conclude that stock market indicators and other control variables have significant impact on the growth of the Nigerian economy..

Basic Inferences

Findings from the study have revealed that market capitalization is the only stock market variable that show significant and positive impact on the growth of Nigeria. This conforms to the findings of Hamid (2006) and Mohamed (2007). These studies in there separate findings on Pakistan and Arab economies discovered a positive and significant relationship between market capitalization and economic growth.
However, result from the study have also revealed that other stock market indicators used in the study that is the stock traded turnover ratio failed to have significant positive impact on the economic growth. The stock traded turnover ratio has been shown to be a better stock market indicator than market capitalization Somoye (2000). The implication of this is that stock market development in Nigeria still appears not to be contributing enough to the economic growth of the country. Sunday (2008) and Abel (2007) also in separate studies on the Nigerian economy posited that the Nigerian stock market has not contributed the expected quota to the growth of Nigeria. It appears that our result from this analysis is also in support of this because they are based on the Nigerian economy.

Finally, the total money supply growth rate is expected to have a significant relationship with the growth of Nigeria. But this is not so from our result. This further shows that the stock market in Nigeria is still not playing the expected role of control of volume of cash in circulation in the economy.

V. CONCLUSIONS

Findings from the study have shown that market capitalization has a significant and positive impact on the economic growth of Nigeria. This is an indication that as market capitalization improves in the stock market in Nigeria the higher the economic growth of the country. However, the stock traded turnover ratio which has been described as a better indicator of the growth of the capital market failed to have any significant impact on the growth of the Nigerian economy.

The implication of this is that the gains from the capital market have not been adequately felt by the Nigerian economy. Therefore it can be concluded that the stock exchange in Nigeria is still fall short of the expected impact it should have on the growth of the Nigeria economy. In addition, the stunted growth of the Nigerian stock market has been further revealed by the weakness of the stock turnover ratio in determining the level of economic growth of Nigeria. This weakness if further revealed in the money supply growth rate coefficient that is not statistically significant. One of the major role of the stock market is the control of volume of cash in circulation. This role appears not to have been played very well by the stock market in Nigeria going by the non significance of the coefficient of the money supply growth rate.

Finally, our findings have shown that policy that include the money supply, inflation rate and exchange rate in the package of stock market indicators such as market capitalization and stock traded turnover ratio is bound to have significant impact on the economic growth of Nigeria. Going, by these findings and conclusions the following policy recommendations will be of immense benefit to the policy makers in Nigeria in repositioning the Nigeria stock market in a way that it will have a more effective and positive impact on Nigeria economic growth.

RECOMMENDATIONS

Considering the findings form the research work the following recommendations are made:

(i) Making the Nigeria stock market more attractive: The study has shown that stock traded turnover is not enough to effectively influence the growth of the Nigerian economy. Consequently, creating of more conducive environment for the stock market to thrive will attract people to make more speculative dealings in the stock market and this will in the long run increase the stock traded turnover ratio.

(ii) Encouraging investment opportunitites: There is the need for government to intensify effort in promoting investment in Nigeria. This can be done by creating enabling environment for investment to thrive in the country. The higher the number of investors in the economy the more the patronage received by the Nigeria stock exchange. Apart from improving the stock market development, investment will also increase domestonic output which is a major antidote for any ailing economy.

(iii) Development of the real sector of the economy: The production sector of an economy is the engine room that propels economic growth. Consequently, Improvement of the production sector can be done through creation of enabling environment for industries to thrive in the country. This can be done by providing adequate infrastructural facilities especially adequate supply of energy for the sector. In addition, putting in place various physical, monetary and fiscal measures that will boost the growth of the real sector of Nigeria economy. This will no doubt promote gains from trade in Nigeria.

(iv) Stamping out of corruption in the stock market. Corruption has been described as the major problem confronting Nigerian economy. The recent situation in the stock market explains the decadence level being experienced in the Nigerian capital market. This has in no doubt affected the growth of the stock exchange. Therefore to improve the contribution of the stock market to Nigeria economic growth corruption must be dealt with.

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