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## Original Research Article

# Financial Markets Efficiency And Nigeria's Economic Development

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## Abstract

This study explored the effect of financial market efficiency on Nigeria's economic development. Annual time series were employed for the period from 1980 to 2018. Using a simple regression model, and financial market depth were used as explanatory variables while gross national income per capita, a proxy for economic development, was the dependent variable. The results show that while financial market efficiency has a significant and positive effect on Nigeria's economic development, the effect of financial market depth is non-significant and positive.

**Keywords:** Financial Market Efficiency; Financial Market Depth; Economic Development, Nigeria.

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## INTRODUCTION

The development of the financial sector for economic development has attracted lots of ideas in economics and financial studies. Financial markets and institutions are the essential spectra of financial systems with great influence on economic development. Over the years, many economists have conceded that financial development is necessary for a nation's economic growth. Generally, the understanding has been that an efficient financial system in combination with a well-developed legal system incorporates elements of the market and bank based-finance (Duisenberg, 2001). Efficient financial decisions are achieved in a well-developed financial system thereby promoting the distribution of

resources and economic growth. The financial system enhances the reallocation of capital and provides a basis for continuous development of the economy. According to Duisenberg (2001), the financial systems includes the financial markets, instruments, and institutions. There are divergent reports on the link between efficiency in financial systems and economic growth. While some studies show a positive significant link, others propose a negative connection between them.

Financial markets are specialized markets responsible for channeling financial resources from the surplus units to the deficit units to perform some forms of economic activities (Ehigiamusoe, 2012). Through financial intermediation, financial markets play

important in the organization of resources for long-term investment. They comprise financial institutions involved in receiving financial resources in the form of savings and allocating them through lending activities. While the relationship between financial markets and economic development has generated lots of ideas among economists, a large number of authors contend that efficient financial markets play a crucial role in economic (the economic growth of a country globally (see Kolapo & Adaramola, 2012; Odetayo & Sajuyigbe, 2012). Financial markets provide trusted banking system, mobile payments, micro-finance schemes, insurance for farmers and primary producers, foreign currency exchange, and capital markets for developing economy. An effective and efficient financial market creates an opportunity for households, firms and government to access funds for the development of the economy. Financial market efficiency implies quick access to funds at affordable rates by households, firms and governments with profitable investment opportunities. This process creates investment opportunities which enhance the distribution of income, mobilization of savings and growth of businesses which in turn enhance economic development.

Economic development has been the primary priority of most nations in the world including Nigeria. Improving the socio-economic capabilities of people in a society is the most important developmental task facing the world today. Economic growth and development are described as the health gauge of the economy (Iram & Nishat, 2008). Financial services such as foreign direct investment stimulate economic growth and development of a country while the financial markets function as intermediaries for the flow of investment into the local economy.

The trailing arguments on the relationship between financial market and economic development have necessitated embarking on this study. A well-developed financial system generates economic development and effective utilization of the benefits of financial services is dependent on its efficiency. Financial markets promote economic growth by funding entrepreneurs and channeling capital to entrepreneurs with high return projects (Schumpeter, 1934). Empirical evidence indicates that the level of financial development is directly linked with the level of economic development of a country. This, therefore, implies that financial market efficiency is functional in a well-developed financial system and economy. Thus, the focus of this study, to investigate the relationship between efficient financial markets and economic growth in Nigeria.

The remaining part of this paper is arranged as follows. In section 2, a brief literature review is highlighted. Section 3 describes the empirical model, while section 4 presents the estimation results and discussion. Section 5 concludes the study.

## 2. LITERATURE REVIEW

### 2.1 Conceptual review

According to literature, the relationship between financial markets and economic development was first examined in 1911 by Joseph Schumpeter. Schumpeter emphasized the role of finance in economic growth and noted that innovation and entrepreneurship can only thrive in an economy that prioritizes the efficient allocation of resources, mobilizes productive savings, regularity in the dissemination of information, and controls the financial risks. This notion implies that for maximum economic development, a well-developed financial system must be achieved. Financial markets are an essential aspect of the financial system and demands effort for effective utilization of its benefit to economic development. They are specialized collection involving individuals, institutions, instruments and mechanisms that enable the transfer of funds from the surplus unit (savings) to deficit units (lending) (Ehigiamusoe, 2012). The services involving financial markets can take place nationally or internationally. Financial markets are connecting tool between the savers and investors and this service is referred to as financial intermediaries. They are categorized into two; money market and capital market. While money markets are short term funds, capital markets are long term fund (Anyanwu, 1996). Capital market is beneficial in mobilizing medium to long-term funds for development purposes such as issuing of houses and stockbroking firms. The capital market provides a means for effective utilization of long-term investment funds by mobilization of savings from surplus unit to deficit unit. Capital markets encourage the inflow of foreign capital through the generation of avenue for investment in the domestic securities by foreign investors and companies. Capital market also enhances the availability of seed money needed for capital development as well perform as medium reliable for expansion of ownership base of family-owned and dominated firms (Ehigiamusoe, 2012). Financial markets constitute of important resources for economic development. Generally, economic development is an indicator of national development. Economic development is seen as the increase in the socio-economic standard of a nation's population

owing to sustained growth from underdeveloped, developing to a developed economy.

Practically, economic development is sourced from every aspect of socio-economic activities such as labor force, technology, capital, natural resource, land, education and knowledgeable skill. Usually, a developed country is attested to by the effectiveness of the available capital such as capital in human, land, resources and income. Invariably, income distribution is enhanced by the development of the financial system and sectors in the country. A well-developed financial system encompasses the development of the constituents such as financial markets, institutions and instruments.

The role of financial development in economic development was recognized in the 17th century and recent economists hold the same view (Ehigiamusoe, 2012). The well-functioning financial market creates access to investment capital and stock markets. The failed ambition of Nigeria in joining the ranks of 20 most developed economies by the year 2020 is attributed to a deficiency in the financial system (Ehigiamusoe, 2012). A well-developed financial sector promotes services that reduce costs of transaction and information and monitoring, hence increasing efficiency in financial intermediation. Financial development plays the role of mobilizing savings, identification and funding of businesses, monitoring the performance of managers, facilitating trading and diversification of risks and fostering the exchange of goods and service. These services create an avenue for efficient allocation of resources, income distribution, a technological innovation that results in enhancement of faster long-term economic growth.

Financial market efficiency guarantees access to funds at cheap costs by the economic units (households, firms and governments). The financial market must be operationally efficient in the allocation of resources (Sharpe, Alexander & Bailey, 2008). However, the connection between financial market efficiency and economic development is uncertain as there are conflicting results from researchers. The results revolve around two issues; whether faster economic development is as a result of financial market efficiency and how financial markets affects economic development. Adding to either of the existing arguments, this study tends to attest the relationship between financial market efficiency and economic development in Nigeria.

## 2.2 THEORETICAL FRAMEWORK

The Efficient Market Hypothesis posits that financial markets are efficient when all relevant information is

fully reflected in a security market price (Fama, 1965). The hypothesis argues that efficient financial markets reflect all known information, are unbiased and represent the collective beliefs of all investors about prospects. This implies that financial markets efficiency creates a conducive environment for investment and businesses to thrive. This assertion is relevant to economic development in that increased exchange of goods and services in a country is an avenue for economic growth and development.

The supply-leading hypothesis states that the direction of causality for economic growth starts with financial development growth. Financial intermediaries exist where there is friction resulting from transaction, information and monitoring costs. However, high costs delimit exchange among economic agents, it then becomes a necessity that the costs for exchange is minimized and thus, the emergence of financial markets and institutions. Development of financial systems provides crucial services to reduce costs thus increasing financial intermediaries. A well developed financial system promotes financial services that foster economic development through the mobilization of savings, business funding, exchange of goods and services etc.

Demand –following hypothesis posits that economic growth leads to financial development. The postulation argues that a developed economy induces increased demand for financial services which in turn encourages innovative financial institutions and markets to satisfy the demands for financial services. This implies that there is a great connection between financial markets efficiency and economic development.

Bi-directional casualty hypothesis postulates that financial deepening and economic growth are mutually casual. This hypothesis is a combination of supply-leading and demand – following hypotheses. This implies that financial development and efficiency induces economic development which in turn encourages financial development as a result of increased demand.

## 2.3 RELATED EMPIRICAL STUDIES

A large number of financial studies have empirically investigated the impact of financial sector development on economic development. The studies engaged qualitative and quantitative approaches using various econometric models and indicators.

Echekoba, Ezu & Egbunike (2013) examined the impact of capital markets on Nigerian economic growth under democratic rule relying on time series data. Using multivariate regression method, the

authors observed a positive influence by the total market capitalization and all share indexes as well as a negative influence by the total value of the stock on the GDP growth rate. The study recommended a purposive effort in the development of the capital market in Nigeria. Similarly, Oluwatosin, Adekanye & Yusuf (2013) analyzed the impact of the capital market on economic growth and development in Nigeria between 1999 and 2012. Using ordinary least square method of regression to analyze data collected from security exchange commission reports, Nigerian stock exchange reviews report and the central bank of Nigeria, it resulted that capital market indices have not impacted on the Nigerian GDP. The researchers concluded that the potentiality in growth and development of the capital market in Nigeria was curbed due to low market capitalization, liquidity, low absorptive capitalization, misappropriation of funds etc. The study recommended enhancement of the appropriate regulatory authority that can restore confidence to the capital market.

An earlier study by Ehigiamusoe (2012) examined the essence of financial markets in the development process in Nigeria. The researcher adopted descriptive research and revealed the fundamental role of financial markets in economic development. The study remarked that the general performance of financial markets in Nigeria is below potential and unable to meet their goal of accelerating the development process. The challenges are noted to include; information gap, lack of instruments, market breadth and depth, dependence on government etc. The researcher further recommended reformation and effective harnessing of financial markets as tools for economic development and creation of an enabling environment by policymakers for financial markets to growth in Nigeria. Odetayo and Sajuyigbe, (2012)

Table 1: Variables, Descriptions, and Sources

| Variable    | Description                 | Source                               |
|-------------|-----------------------------|--------------------------------------|
| <i>GNIP</i> | Financial Development       | World Bank Database                  |
| <i>FME</i>  | Financial Market Efficiency | International Monetary Fund Database |
| <i>FMD</i>  | Financial Market Depth      | International Monetary Fund Database |

3.1 Model specification

The model for data analysis was specified as follows;-

$$GNIP = \beta_0 + \beta_1 FME_t + \epsilon_t \text{ ----- eqn. 1}$$

investigated the impact of capital markets on Nigerian economic growth and development from 1990-2011. The researchers adopted the Ordinary least square regression and discovered a significant impact on the economic growth by capital market indices. Also, Vazakidis and Adamopoulos, (2009) studied the causal nexus on the relationship between stock market development and economic growth in France from 1965 to 2007. Adopting cointegration, granger causality test and vector error correction model, the finding showed a significant positive connection between stock market development and economic growth. Kolapo and Adaramola (2012) employed Johansen cointegration and Granger causality tests to examine the impact of the Nigerian capital market on economic growth from 1990-2010. The results of their study show that there is a long-run relationship between the Nigerian capital market and economic growth. The researchers recommended that the regulatory authorities should initiate policies that encourage confidence among companies in accessing the market despite conducive practices.

Obamiro (2005), noted that there is a positive significant influence of the stock market on economic growth by investigating the roles of Nigerian stock markets paving economic growth.

3. Methodology

This study examined the effect of financial market efficiency on

Nigeria’s economic development. The annual data series employed for

were for the period from 1980 to 2018. The sources of data and the descriptions of the variables are abridged in Table 1.

$$GNIP = \beta_0 + \beta_1 FMD_t + \varepsilon_t \text{----- eqn. 2}$$

Where

GNIP = Gross National Income Per Capita

FME = Financial Markets Efficiency

FMD = Financial Markets Depth

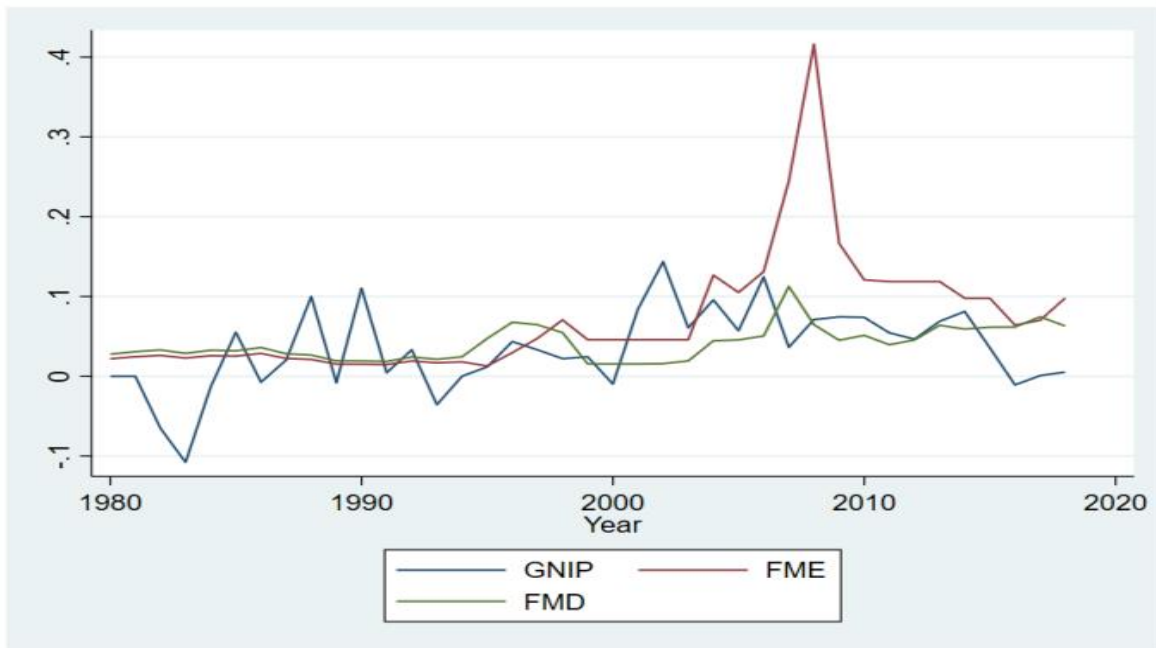
$\beta_0$  = Intercept

$\beta_1$  = Coefficient of Correlation.

$\varepsilon_t$  = Residuals in the equation

#### 4. Empirical Results

In order to produce reliable results, a stationarity test is necessary before proceeding to time series analyses.



The above trend line shows that the time series is stationary around the mean. They all exhibit constant mean reversion. That is, they fluctuate around 0. Hence, our time series is reliable.

First Model:  $GNIP = \beta_0 + \beta_1 FME_t + \varepsilon_t$



**Table 3.2** Regression (GNIP & FME) Table from STATA

```
. regress GNIP FME
```

| Source   | SS         | df | MS         | Number of obs | = | 39     |
|----------|------------|----|------------|---------------|---|--------|
| Model    | .011414688 | 1  | .011414688 | F(1, 37)      | = | 4.84   |
| Residual | .087328086 | 37 | .002360219 | Prob > F      | = | 0.0342 |
| Total    | .098742773 | 38 | .002598494 | R-squared     | = | 0.1156 |
|          |            |    |            | Adj R-squared | = | 0.0917 |
|          |            |    |            | Root MSE      | = | .04858 |

| GNIP  | Coef.    | Std. Err. | t    | P> t  | [95% Conf. Interval] |          |
|-------|----------|-----------|------|-------|----------------------|----------|
| FME   | .2257108 | .1026352  | 2.20 | 0.034 | .0177521             | .4336696 |
| _cons | .0174635 | .0107192  | 1.63 | 0.112 | -.0042556            | .0391827 |

Estat dwatson

Durbin-watson d-statistics (2, 39) = 1.404631

Table 3.2 shows the regression output from STATA. The Durbin-Watson d-statistic of 1.404631 implies that the regression output is not spurious; hence, it is reliable.

The R-square of 0.1156 shows that financial market efficiency (FME) can only explain 11.56% of the variation in Gross National Income Per Capita. The p-value of 0.0342 implies that the model fit is very

significant.

Since p-value [0.0342] < [0.05], the null hypothesis is rejected which provides evidence that financial market efficiency has significant and positive effect on economic development (proxied by GNIP)

$$\text{Second Model: GNIP} = \beta_0 + \beta_1\text{FME} + \epsilon$$

**Table 3.3** Regression (GNIP & FMD) Table from STATA

```
. regress GNIP FMD
```

| Source   | SS         | df | MS         | Number of obs | = | 39      |
|----------|------------|----|------------|---------------|---|---------|
| Model    | .000642383 | 1  | .000642383 | F(1, 37)      | = | 0.24    |
| Residual | .09810039  | 37 | .002651362 | Prob > F      | = | 0.6255  |
| Total    | .098742773 | 38 | .002598494 | R-squared     | = | 0.0065  |
|          |            |    |            | Adj R-squared | = | -0.0203 |
|          |            |    |            | Root MSE      | = | .05149  |

| GNIP  | Coef.    | Std. Err. | t    | P> t  | [95% Conf. Interval] |          |
|-------|----------|-----------|------|-------|----------------------|----------|
| FMD   | .1928098 | .3917117  | 0.49 | 0.625 | -.6008735            | .9864932 |
| _cons | .0257671 | .0180691  | 1.43 | 0.162 | -.0108442            | .0623785 |

Estat dwatson

Durbin Watson d-statistic (2, 39) = 1.221115

Table 3.3 shows the regression output from STATA. The Durbin-Watson d-statistic of 1.22115 shows that the regression output is not spurious; hence, it is reliable.

The R-square of 0.0065 shows that financial market depth (FMD) can only explain 0.65% of the variation in Gross National Income Per Capita. The p-value of 0.625 implies that the model fit is non - non-significant. Since p-value

[0.6255] > [0.05], the null hypothesis cannot be rejected which provides no evidence that financial market depth has significant impact on economic development.

## 5. CONCLUSION

This study empirical study investigated the effect of financial market efficiency on Nigeria's economic development, using annual data series spanning the period from 1980 to 2018. The results of the study suggest that while financial market efficiency has significant and positive effect on economic development, the effect of financial market depth on economic development is positive but non-significant. Our results produced a slightly different result. There is evidence of financial market efficiency influencing economic development but evidence of financial market depth influencing economic development could not be found. This finding contradicts the postulation of Efficient Market Hypothesis which implies that financial markets efficiency creates a conducive environment for investment and businesses to thrive, hence enhancing economic development.

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