FINANCIAL DEVELOPMENT, TRADE OPENNESS AND ECONOMIC GROWTH IN NIGERIA: A GRANGER CAUSALITY APPROACH

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Abstract

The causal relationship between financial development and economic growth in Nigeria from 1980 2009 is examined in this paper. Financial development is decomposed into ratio of broad money supply to GDP and the ratio of private sector credit to GDP. The empirical results showed that GDP granger causes both money supply ratio and private sector ratio. Conversely, GDP follows foreign direct investment and inflation and there is no causal relation between trade openness and GDP. It is therefore concluded that the demand-following hypothesis is valid for Nigeria. The paper recommended policies that promote the inflow of foreign direct investment and moderate inflation for economic growth to be sustained.

Key Words: Financial Development, Trade Openness, GDP, FDI, Granger Causality.

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1. Introduction

Economic growth is a major topic in macroeconomics because it directly affects economic wellbeing. Economic growth not only increases the standard of living for many individuals in the labour force, but also allows the society to cater better for those who are unable to work. Economist, therefore, are very much concern about investigating into the determinants of economic growth for both the developed and developing economies. Financial development and trade openness have been identified as the major determinants of economic growth in recent times and both theoretical literatures and empirical studies have supported the relationship between financial development and economic growth and specifically, most of these empirical literatures tried to identify the causal relationship between them.

Financial development of an economy shows the extent to which financial resources can be made available for the investors to invest in the real sector, and higher investment translate into economic growth. Similarly, trade openness increase the country's potential for importing capital goods and advanced technology which are for economic growth. Trade openness also allows a country to expand its market and increase foreign exchange earnings.

Empirical literatures that tested this hypothesis using time series data include: Lyons and Murinde, (1994) for Ghana; Ogbonna (2010) for Botswana. The justification for this study, therefore, is to provide further evidence by analyzing the causal relationship between financial development and economic growth in Nigeria. This study is an improvement over the earlier works because it has incorporated trade openness, foreign direct investment and inflation as explanatory variables. The remaining parts of this paper are structured as follows: Section 2 theoretical and empirical literatures; Section 3 data and methodology; section 4 empirical results and discussion; section 5 conclusion.

2. Theoretical and Empirical Literatures

The literatures on finance-growth relationship are broadly categorized into two: Supply-leading and demand following hypotheses. According to supply-leading hypothesis, finance is a contributing factor in economic growth. Financial sector transfers resources from the traditional low-growth sector to modern high –growth sector and promote and stimulate entrepreneurial responses in this modern sectors. Demand-following hypothesis, on the other hand, argued that finance is dependent upon economic growth, that is, the creation of modern financial institutions

and financial services are a response to the demand for these services by investors and savers in the real economy. The financial system adapts its self to the financial needs of the real sector and fit in with its autonomous developments, playing a relatively passive role in the growth process.

The Classical and Neoclassical economists believed that participation in trade openness could be a strong positive force for economic growth and development. This positive role of trade openness in economic growth led countries around the world to integrate domestic economy with the rest of the world in the form of increased exports and imports. Trade openness leads to economic growth by increasing a county's specialisation and productivity level.

Felix R. and Never T. V. (2002) using GMM dynamic panel technique proposed that there is not uniform relationship between Financial Development and Growth but varies according to the level of financial development of the country. For example, additional improvement in financial markets has an uncertain effect on growth in countries with very low level of financial development but has a large, positive effect on growth in the international countries. The effect of financial development on growth in countries with high financial development is positive but smaller.

Mohsin S K. and Abdelhak S. S. (2003) examined the relationship between financial development and economic growth for a large sample of countries. The results indicated that the effect of financial development on growth is positive but the size of the effect varies with different indicators of financial development, method of estimation, data frequency and the functional form of the relationship.

Houssem R. (2011) using an error correction technique examine the causal relationship between financial development and economic growth for a sample of 6 OECD countries and 4 MENA countries. The empirical results shows that the causality is bidirectional for the OECD countries and unidirectional for the MENA countries. Also the panel data analysis indicates a long-term relationship between financial development and economic growth for both countries.

Guryay et al (2007) empirically examines the relationship between financial development and economic growth for Northern Cyprus. The study employed the ordinary least square technique to show that there is insignificant positive effect of financial development on economic growth. They posit that causality runs from growth to financial development without a feedback.

Peter L. R. and Paul, W. (2000) explored the triangle of relationship between finance, inflation and growth with panel data from as many as 84 countries for 1960 – 95. The results of standard

growth equation revealed that inflation inhibit economic to growth and the effect disappears when inflation is moderate. Further, the result indicates stronger effect of financial depth on growth in the presence of inflation but high inflation weakens the effect of financial development on growth.

Eita and Jordaan, (2007) analyzed the causal relationship between financial development and economic growth in Botswana for the period 1977 to 2006, using Granger Causality through Cointegrated Vector Auto- regression methods. The results showed that there is stable long run relationship between financial development and economic growth. Financial development causes economic growth in Botswana. The causality runs from financial development to economic growth.

Kar and Pentecost (2000) examines the causal relationship between financial development and economic growth in Turkey using cointegration and vector error-correction methodology (VECM). The empirical results showed that the direction of causality between financial development and economic growth in turkey is sensitive to the choice of proxy for financial development and concludes that there is no wholesale acceptance of the view that finance leads growth just as there can be no wholesale acceptance of the view that finance follows growth in Turkey.

Benhibib, J. and Spiegel, M. M. (2000) examined whether financial development affect growth safely through it contribution to growth in primitives or factor accumulation rate or whether it also has a positive impact on total factor productivity growth. The result shows that financial development indicators are co-related with both total factor productivity growth and investment.

Peter L. R. and Alexander D. (2012) using vector auto-regressive and error correction model, examine the relationship between financial development and growth for 22 countries in sub-saharan Africa. The result shows unidirectional links from financial development to measures of real activity for about two third of them. In addition, the effect comes from narrow money rather than more broadly defined financial aggregates. They concluded that monetization retains a distinct role in capital accumulation and growth in many of these countries.

Muhammad A.K (2012) examined the relation between financial development and economic growth using auto-regressive distributed lag (ARDL) framework. His findings show that

financial development and investment impacted positively on economic growth both in the short and long runs. Also, real deposit rate exerted a positive effect on economic growth in the long run but its effect is only significant in the short run. The long and short run responses of real interest rate are very low as compare to financial development variables implying that the availability of funds is more important than their cost. He recorded a further acceleration of liberalization process in the country with strong commitment in order to achieve a sustainable economic growth.

3. Data and Methodology

The data used in this study is sourced from Central Bank of Nigeria (CBN) statistical bulletin and the National Beaureau of statistics for the for 1980 to 2009. The data includes gross domestic product (**GDP**), financial development which is decomposed into two: ratio of private sector credit to GDP (**CRDGDPR**) and ratio of broad money supply to GDP (**M2GDPR**). Other variables include trade openness (**TRADOPP**) proxied by ratio of total trade to GDP, foreign direct investment **(FDI)** and inflation rate **(INFLATION).**

Model Specification

In this research, we adopted the model used by Ogbonna (2010) with some modifications. GDP as a dependent variable is regressed on private sector credit, trade openness, FDI and inflation as independent variables as follows:

$GDP=\beta_o+\beta_1 PCRDGDPR+\beta_2 M2GDPR+\beta_3 TRADOPP+\beta_3 nFDI+\beta_4 INLATION + Et$

Where:

GDP = gross domestic product

CRDGDPR = ratio of domestic credit to GDP

M2GDPR = ratio of broad money supply to GDP

TRADOPP = trade openness

FDI = foreign direct investment

INFLRATE = inflation rate

4. Results and Discussion.

Table 1. Granger Causality Test Results

Null Hypothesis:	Obs	F-Statistic	Probability
M2GDPR does not Granger Cause GDP	29	1.31905	0.26122
GDP does not Granger Cause M2GDPR		6.07055*	0.02068
CRDGDPR does not Granger Cause GDP	29	0.45290	0.50690
GDP does not Granger Cause CRDGDPR		6.44787*	0.01743
FDI does not Granger Cause GDP	29	3.55978**	0.07041
GDP does not Granger Cause FDI		0.43524	0.51523
TRADOPP does not Granger Cause GDP	29	0.62475	0.43644
GDP does not Granger Cause TRADOPP		0.50893	0.48196
INFLATION does not Granger Cause GDP	29	2.85236**	0.10320
GDP does not Granger Cause INFLATION		1.12622	0.29834

Source: Researcher computation using Eviews 4.0

* ,** denote rejection of null hypothesis at 1% and 5% respectively.

Table 1 above shows the results of the causal relationship between GDP and other explanatory variables. There is a unilateral relationship between GDP and the ratio of money supply to nominal GDP with the causation following from GDP to M2GDPR. Similarly, there is a unilateral relationship between GDP and ratio of domestic credit to GDP and the causation is from GDP to CRDGDPR. A causal relationship is also indicated between GDP and Inflation, GDP and FDI with the causation follow from Inflation and FDI. No causal relationship is identified between GDP and trade openness.

It can be seen from the results that for Nigeria GDP granger cause financial development as decomposed into broad money supply and credit and this is consistent with the findings of Ogbonna (2010) for Botswana. Inflation and FDI granger cause GDP for Nigeria and neither GDP granger cause trade openness nor trade openness granger cause GDP.

5. Conclusion

The main objective of this paper is to investigate the causal relationship between economic growth and financial development in Nigeria from 1980 to 2009. The empirical results shows that economic growth leads to financial development when financial development is decomposed into two: the ratio of broad money supply to GDP and the ratio of private sector credit to GDP.

This supports the view that growth promotes financial development in Nigeria. Conversely, GDP follows FDI and Inflation. Therefore, policies that promote FDI and low inflation are needed to propel economic growth.

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