

Financial Development, Fiscal Balance and Economic Growth Nexus in Nigeria

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Abstract

This study critically examines the effect of financial development and fiscal deficits on economic growth in Nigeria since a decade after independence (1970) and 2012. The study employs a multiple regression model estimated using the classical least square method of estimation. The estimated model results reveal that financial development (FD) measured by ratio of total private claims to gross domestic product, Fiscal balance proxied by fiscal deficit (FD), and exchange rate (ER) exert positive influence on economic growth proxied by real gross domestic product (RGDP) in Nigeria. Also, financial liquidity/ widening measure as ratio of total money supply to gross domestic product (FL) and monetary policy rate (MP) are found to exert negative effects on economic growth in Nigeria during the period under review. The study later rejects the null hypothesis and concludes that financial development and fiscal balance have significant effect on economic growth in Nigeria. The study recommends some policy options of fostering economic growth on the basis of the reported findings.

Keywords: Financial Development, Fiscal Policy, Monetary Policy, Economic Growth.

Jel Classification: H30, O40, E62, H60.

1. Introduction

The potential impact of fiscal policy and financial development is a neglected issue. Mostly, it has been associated with a positive role of government debt in developing financial sectors (Kumhof and Tanner, 2005). On the negative side, it is well-known that financial repression and inflation, which are detrimental to financial development and growth (Roubini and Sala-i-Martin, 1992; Boyd et al, 2001), tend to be rooted in governments' fiscal needs (Bencivenga and Smith, 1992; Catão and Terrones, 2005). The aim of this study is therefore, to examine the growth impacts of financial development and fiscal balance on the growth of the Nigerian economy.

In the communiqué following their London summit in April, leaders of the Group of Twenty industrial and emerging market countries stated that they are undertaking "unprecedented and concerted fiscal expansion." What do they mean by fiscal expansion? And, more generally, how can fiscal tools provide a boost to the world economy? Historically, the prominence of fiscal policy as a policy tool has waxed and waned. Before 1930, an approach of limited government, or *laissez-faire*, prevailed. With the stock market crash and the Great Depression, policymakers pushed for governments to play a more proactive role. More recently, countries scaled back the size and function of government, with markets taking on an enhanced role in the allocation of goods and services. Now, with the financial crisis in full swing, a more active fiscal policy is back in operation. When policymakers seek to influence the economy, they have two main tools at their disposal—monetary policy and fiscal policy. Central banks indirectly targets activity by influencing the money supply through adjustments to interest rates, bank reserve requirements, and the sale of government securities and foreign exchange. Governments also influence the economy by changing the level and types of taxes, the extent and composition of spending, and the degree and form of borrowing.

The successes and failures of fiscal adjustment raise many issues. Not the least of these is how to define and measure fiscal adjustment. What are the most meaningful measures of public sector deficits? How should one assess fiscal stance, public sector solvency, and sustainability of deficits? The budget deficit is therefore often subjected to intense interest and scrutiny. Unless interpreted with caution however, the conventionally defined budget deficit could give rise to misleading conclusions of fiscal policy stance and possible erroneous policy prescriptions (Abedian and Biggs 1998: 185).

A large body of empirical research supports the notion that healthy budgetary balances are, over the long run, good for growth (Easterly et al., 1994). The effect of fiscal consolidation on growth in the short run, however, remains open to question as a number of studies largely for industrial countries have drawn the conclusion that under some circumstances fiscal contractions can stimulate growth (See, for example, McDermott and Wescott (1996), Alesina and Perotti (1996), Alesina et al. (1998), Alesina and Ardagna (1998), Buti and Sapir (1998), Von Hagen and Strauch (2001), Alesina et al. (2002).). A central theme in these works is that the composition of fiscal adjustment plays a key role in determining whether fiscal contractions lead to higher growth and are also sustainable over time. These studies show that improving financial service delivery and fiscal positions through the rationalization of the government wage bill and public transfers, rather than increasing revenues and cutting public investment, can foster higher growth even in the short run.

Emanating from the above discussion this study investigates the effect of financial development and

fiscal deficit on economic growth in Nigeria between 1970 and 2012. The time frame is chosen to cover several economic reforms era. This tends from the era of Pre to Post Structural Adjustment Programme (SAP) in Nigeria.

2. Theoretical and Empirical Review

2.1 Theoretical Framework

As summarized by Economidou (2007), there are two main views on the financial-growth transmission mechanism. The first view known as the supply-leading view asserts that financial development has a positive effect on economic growth. Accordingly, the effect runs from financial development to economic growth and it is caused by an improvement in the efficiency of capital accumulation or an increase in the rate of savings as well as the rate of investment.

The demand-following view on the other hand, states that financial development responds to changes in the real sector. The postulation of this thought is that the causality runs from economic growth to financial development, that an increase in economic growth causes a rise in demand for financial services and this results in the expansion of the financial sector (Jung, 1986 and Ireland, 1994). Besides, in between the supply-leading and demand-following views, there are two other views, the first postulates that there is mutual impact between financial development and economic growth, while the second one asserts no relationship between financial development and economic growth (Apergis et al. 2007).

According to Patrick (1966), the causal relationship between financial development and economic growth depends on the stage of economic development. In the early stages of economic development, supply leading view can stimulates real capital formation. The development of new financial services creates new opportunities for savers and investors and causes an increase in economic growth. The supply-leading view become less important as financial and economic development proceeds gradually, then the demand-leading view starts to dominate. Patrick (1966) states that one industry can be encouraged financially on the basis of supply-leading view, and when it develops, its financing shifts to demand leading. Other industries that are still at a low level of development will remain in the supply-leading phase.

2.2 Empirical Review

Plethora of studies investigated the relationship between financial development and the level of economic growth in Nigeria. These studies include Akinlo and Akinlo (2007), Ayadi et al (2007), Ndebbio (2004), Oyejide (1998), Edo (1995), Ogun (1986). The studies relied on money market indicators and established a positive and significant relationship between financial development and economic development (Nwaogwugwu: 2008).

Also, empirical evidence on the relationship between financial development and economic growth dates back to the work of Schumpeter (1911) where he emphasized that the services provided by the financial intermediaries are important for innovation and development. The studies of Greenwood and Smith (1997) and Levine (1997) further support and emphasize the positive interactions of financial development and economic growth. They argue that in a developing financial sector, the creation of credit causes an increase in economic growth. The creation of credit should not be constrained by the supply of deposits because there exist an idle balance in the banking system.

Further, empirical analyses of the impact of financial development on long-run economic growth include, among others, the World Bank (1989), Roubini and Sala-i-Martin (1992), and King and Levine (1993). The central features of these studies are that they used cross-section analysis to link measures of financial development with economic growth. The evidence emerging from cross-section growth regressions (à la Barro, 1991) provided pooled estimates of the effects of financial development on economic growth, and disregarded country-specific factors. However, such cross-country growth regressions were not able to capture the dynamics of the relationship between financial development and economic growth. Another pitfall of cross-country studies is that, when economic growth is regressed on a wide spectrum of variables, researchers tend to interpret a significant coefficient of the measure of financial development as a confirmation of causality from financial development to economic growth. However, as observed by Abu-Bader and Abu-Qarn (2008), a significant coefficient of the financial measure in such a regression can be equally compatible with causality running from financial development to economic growth, with causality running from economic growth to financial development or with bi-directional causality between the two variables. Such inadequate assessments of causal relationships in a static cross-section setting have led to a search for more dynamic time series analyses to unravel whether financial development causes economic growth or vice versa.

In addition, as a way to resolve the causality problem of cross sectional studies, time series studies on the financial development and economic growth relationship have shown that the pattern of relationship differs significantly among countries. The studies by Demetriades and Hussein (1996), Luintel and Khan (1999), Bell and Rousseau (2001), and Shan et al. (2001) not only support that the pattern of causality differs significantly among countries, they also show that evidence for a unidirectional link from financial development to economic growth is generally weak. Thus, to enhance our understanding of the causal relationship between financial

development and economic growth it is essential to perform studies on individual countries using a diverse set of financial measures.

In lieu of this, attempt was made in the study of Abu-Bader and Abu-Qarn (2008) by adopting such an approach to gain insight into the causal relationship between financial development and economic growth for six Middle Eastern and North African (MENA) countries including Algeria, Egypt, Israel, Morocco, Syria, and Tunisia for the period 1960 to 2004 due to data availability. The empirical results of their study strongly support the hypothesis that finance leads to growth in five out of the six countries with only Israel showing a weak relationship.

3. Methodology and Empirical Findings

3.1 Model Specification

Based on the nature of incorporated variables in the formulated model, secondary data is employed for the analysis. The time series data are sourced from the Central Bank of Nigeria (CBN) Statistical Bulletin, Volume 23, 2012 and World Development Indicator (April, 2013). The econometric model employed by Levin (1997) to analyze the inter-relationship between financial development and economic growth in selected 77 developing countries is adopted for this study. Levin (1997) empirical model is formulated to incorporate four financial development indicators (depth of liquidity, bank deposit, private non-financial claims and private claims to GDP) augmented with the integration of exogenous factors represented as X. The adopted econometric model is expressed as:

$$G_t = \alpha_0 + \alpha_1 F + \alpha_2 X + u \quad (1)$$

Where G = Real gross domestic product growth;

F = Financial development indicators

X = set of exogenous factors.

α_0 = Intercept or constant;

α_{1-2} = Parameters or Co-efficient of explanatory variables;

u = Error term;

According to Levine, X is represented as a matrix of conditioning information to control for other factors associated with growth (e.g., income per capita, education, political stability, indicators of exchange rate, trade, fiscal, and monetary policy). Therefore, for the essence of this study the Levine (1997) model is modified taking into consideration a single country scenario in the empirical analysis and the structure of the Nigerian economy in relation to financial sector dynamics. Based on non-availability of wide disaggregated data on some financial sector indicators, it is only private claims and money supply ratio to GDP that are considered as proxy for financial development in this study. From the set of exogenous factors considered in the empirical work of Levine (1997), monetary policy interest rate, exchange rate, and fiscal deficit are considered in this study and the model is expressed as follows:

$$G_t = \alpha_0 + \alpha_1 FL + \alpha_2 FP + \alpha_3 FD + \alpha_4 MP + \alpha_5 ER + u \quad (2)$$

Where: FL = Ratio of total money supply to GDP as financial liquidity.

FP = Ratio of total private claims to GDP as second indicator of financial development;

FD = Fiscal deficit. The difference between total revenue and expenditure;

MP = Monetary policy rate proxied by interest rate;

ER = Exchange rate of naira vis-à-vis U.S dollar;

α_0 = Intercept or constant;

α_{1-4} = Parameters or Co-efficient of explanatory variables; In a-priori terms, all, the incorporated variables in the modified Levine (1997) model are expected to enhance economic growth positively.

3.2 Estimation Techniques

In estimating the multiple regression model, the unrestricted Classical Least Square (CLS) is used. The estimated parameters are subjected to evaluation by using the student t-statistic and F-statistic tests, while the overall stability of the specified empirical model is tested using multiple co-efficient of determination (R^2), adjusted R^2 and Durbin-Watson statistics.

3.3 Empirical Results and Discussion of Findings

The estimated result for the multiple regression specified to capture the effect of financial development and fiscal balance on economic growth in Nigeria between 1970 and 2012 presented in table 1 reveals the effect of incorporated macroeconomic factors for the econometric analysis of the study. Table 1 reports that financial development as measured by ratio of total private claims to gross domestic product (FP), Fiscal balance as

proxied by fiscal deficit (FD), and exchange rate (ER) exert positive influence on economic growth proxied by real gross domestic product (RGDP) in Nigeria between a decade after Nigeria's independence and 2012 fiscal year. These outcomes are in conformity with the theoretical expectation. This implies that for a unit increase in financial deepening as measured by ratio of total private claims to gross domestic product (FP), fiscal balance as proxied by fiscal deficit (FD), and exchange rate (ER), the real gross domestic product (RGDP) increases by 754398.6, 12272138 and 81963.07 units respectively.

The table 1 also reports that financial liquidity/ widening measure as ratio of total money supply to gross domestic product (FL) and monetary policy rate (MP) are found to exert negative effects on economic growth in Nigeria during the review period and these does not conform with the a-priori expectation for the case of monetary policy rate. This implies that lending rate that is determined by monetary policy rate (MP) fixed by the Central Bank of Nigeria (CBN) and financial liquidity (FL) have deteriorating effect on economic growth in Nigeria. A percentage increase in financial liquidity/ widening and monetary policy will deteriorate the real gross domestic product by 413459.2 and 102654.9 units respectively.

In assessing the partial significance of the estimated parameters for the considered variables, the t-statistics results as presented in table 1 shows that the estimated parameters for financial widening/ liquidity (FL), financial deepening (FP) and exchange rate (ER) were found to be statistically significant at 5%, while, the estimated parameters for fiscal balances (FD) and monetary policy rate (MP) were found to have insignificant effect on economic growth in Nigeria at both 5% and 10% significant levels. Although, the F-statistic result shows that all the incorporated financial development and fiscal balance variables are simultaneously significant at 5% level, the adjusted R² result reveals that 89% of the total variation in economic growth is accounted for by changes in financial liquidity (FL), financial deepening (FP), fiscal balance (FB), monetary policy rate (MP), and exchange rate (ER) during the review period. The Durbin- Watson test result reveals that there is presence of negative serial correlation among the residuals.

4. Conclusion and Policy Recommendations

The analysis of the effect of financial development on economic growth in Nigeria between 1970 and 2012 spanned through the period of Pre-Structural Adjustment Programme (SAP), Structural Adjustment Programme (SAP), Post-Structural Adjustment Programme (SAP) and also the era of National Economic Empowerment Development Strategy (NEEDS). Empirical findings reveal that financial widening/ liquidity (FL), financial deepening (FP) and exchange rate (ER) are significant factors influencing the growth rate of the Nigerian economy.

Therefore, based on the findings the study concludes that financial development has significant effect on the Nigerian economy during the reviewed period.

On the basis of the empirical findings, the following strategic policy options are proffered as follow:

- I. The monetary authority should effectively regulate and monitor the liquidity level in order to foster real sustainable growth;
- II. Non-inflationary driven monetary expansion policy should be adopted in order to enhance the level of financial depth in the economy. This tends to increase output level via investment expansion and availability of investible funds for both the private and public sectors;
- III. The concerned monetary authority should ensure long-term price stability in the economy to foster high level of financial liquidity integration in the system and promote output;
- IV. The monetary policy rate should be relatively stable and strictly monitored considering its deteriorating effect on output level and facilitate the disbursement of investment funds created on the basis of the financial depth and liquidity in the economy;
- V. Also, proactive measures and strategic steps should be taken to promote the domestic financial depth to the global level considering the positive and significant growth effect of trade relations and foreign price stability. This is to tap from the wide liquidity level in the competitive global market in order to promote output further and expand the financial sector base in the domestic economy.

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Appendix

Table 1: Estimated Regression Results

Dependent Variable: GDP				
Method: Least Squares				
Sample: 1970 2012				
Included observations: 43				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1849367.	2404006.	0.769285	0.4469
FL	-413459.2	150959.9	-2.738868	0.0096
FP	754398.6	153032.2	4.929672	0.0000
FD	12272138	12607970	0.973363	0.3371
MP	-102654.9	77347.93	-1.327184	0.1930
ER	81963.07	11083.83	7.394833	0.0000
R-squared	0.904780	S.D. dependent var		7667057.
Adjusted R-squared	0.891177	F-statistic		66.51382
Durbin-Watson stat	0.854320	Prob(F-statistic)		0.000000

Source: Computed by the authors.