Bank Credit and Economic Growth: Evidence from Nigeria

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Received 2 October 2012; accepted 22 November 2012

Abstract
This paper assesses the significance of real bank credit in stimulating real output growth in the case of Nigeria. The study observes that credit Granger causes output. In testing the factors that mobilise credit, it finds that exports in general are negatively related to credit. However, while oil exports are negatively related to credit, non-oil export has positive relationship with credit. Credit is also positively linked to capital inflows and imports. These findings suggest that bank credit is inextricably linked to the opening of the economy to international trade and capital flows in non-oil.

Key words: Bank credit; Economic growth; Nigeria

INTRODUCTION
The importance of financial institutions in generating growth within the economy has been widely discussed in the literature. Early economists such as Schumpeter in 1911 identified banks’ role in facilitating technological innovation through their intermediary role. He believed that efficient allocation of savings through identification and funding of entrepreneurs with the best chances of successfully implementing innovative products and production processes are tools to achieve this objective. Several scholars thereafter (McKinnon, 1973; Fry, 1988; King & Levine, 1993) have supported the above postulation about the significance of banks to the growth of the economy. In assessing the relationship, a large number of recent empirical studies (De Serres et al., 2006; Levine, 2005; etc) have relied on measures of size or structure to provide evidence of a link between financial system development and economic growth. They used macro or sector level data such as the size of financial intermediation or of external finance relative to GDP and found that financial development has a significant positive impact on economic growth.

Economic growth is defined as a positive change in the national income or the level of production of goods and services by a country over a certain period of time. This is often measured in terms of the level of production within the economy. Other possible measures include total factor productivity, factors of production such as technological change, human capital termed the Schumpeterian approach, other measures of growth ranges from real per capita GDP; the rate of physical capital accumulation etc (Odedokun, 1998; King & Levine, 1993; Allen & Ndikumama, 1998).

There remain divergent views on the issue of causality. Alternative explanation has been empirically offered for the relationship that exists between financial intermediation and growth based on the direction of causation. In essence, financial intermediation can be a causal factor for economic growth. In essence, the literature on the finance and growth relationship is not settled yet, while there is a renewed interest globally into the study of credit and its ability to generate growth. These studies concluded that firms that are able to get external finance are more likely to grow than those limited to internal finance only. Recent studies by Beck et al. (2005); Levine (2002) and Boyreau-Debray (2003) emphasised the importance of efficiency of the allocation of credit than an all bank intermediation. According to them, credit to the public sector is weak in generating growth within the economy because they are prone to waste and politically motivated programmes which
may not deliver the best result. Financial development has a positive impact on growth if efficiently channelled, they concluded.

Studies on developing economies and specifically in African countries are relatively few; this is often attributed to poor level of financial development and unavailability of quality data. However, some of them are already making good efforts in this regard. The Nigerian economy is one of such and also a leading exporter of crude oil in the world. The Nigerian economy production base increased drastically with the discovery of crude oil in the early 70’s. This has had significant effect on the growth of the economy. Sequel to this discovery, there was large increase in the GDP base of the country with a shift in the export base of the country from a multi product and agrarian economy to a mono product and oil exporting economy. This study observed that the percentage contribution of oil and non-oil to total export were 57.6% and 42.4% in 1970. This has increased and reduced to 98.3% and 1.7% respectively for oil and non-oil export by 2005. Therefore, the increase witnessed with total export is attributable to oil export. Despite this situation, the country is grouped amongst the less developed economies and even ranked 80 amongst the world’s poorest 100 countries. The GDP per capita is $1,128 while 40% live below poverty level.

Based on this background, the objective of this paper is to re-examine the relationship between financial development and growth as it applies to the Nigerian economy with a view to determine whether bank credit is a significant instrument for generating growth. We shall also examine the factors that are significant in determining the growth of the financial system in Nigeria. Data used for the study are annual and obtained from the IFS and the Central Bank of Nigeria for the period covering 1970 to 2005.

We find that though the country is largely dependent on exports of oil, it is negatively related to the development of the financial sector. Foreign inflow, non- oil exports and imports are positively related and significant in mobilising the financial sector. Secondly, a reverse causation is observed in the relationship between finance and growth for the country. This is assumed to be the result of poor intermediation for oil exports by the financial institution within the country. The other sectors namely non-oil exports and imports that are relatively intermediated for by the financial sector are found to be positively and significantly important for the development of the financial sector. This trend needs to be reversed to ensure the continued development of the financial sector. The key principle is “it is not where economic activity happens that necessarily has the financial sector develops, but the source of intermediation for the economic activity that essentially gets developed.

1. FINANCE AND GROWTH-PREVIOUS LITERATURE

The existence of a relationship between finance and growth seems incontestable as many researchers have worked on the issue and positively confirmed it. What is still debatable is the direction of causality. Patrick (1966) describes the direction of causality as a supply-leading and demand-following while Demetriades & Hussein (1996) postulated the third as bi-directional causation.

Proponents of the supply-leading hypothesis believe that the activities of the financial institutions serve as a useful tool for increasing the productive capacity of the economy. They argue that countries with better-developed financial system tend to grow faster. Going through the literature in more detail, the seminal study conducted by King and Levine (1993) showed that finance not only follows growth; finance seems important to lead economic growth. Greenwood and Jovanovic (1990) also find that financial institutions produce better information, improve resource allocation (through financing firms with the best technology) and thereby induce growth. Several research works on finance and growth support a positive correlation between the two variables while causality emanates from finance to growth (Schumpeter, 1934; Mckinnon, 1973; Gross, 2001; Diego, 2003; Calderon & Liu, 2003; Fase & Abma, 2003; Christopoulos & Tsonias, 2004; Demirguc-Kunt & Levine, 2008; Akinlo & Egbeutunde, 2010; Johannes et al., 2011).

The proponents of the demand-following hypothesis postulate that economic growth is a causal factor for financial development. According to them, growth in the real sector stimulates the financial sector (Gurley & Shaw, 1967). Robinson (1952), states that economic activities propel banks to finance enterprises, thus, where enterprises lead, finance follows. Similar view is held by some researchers including Goldsmith (1969), Lucas (1988), Muhsin and Eric (2000) and Favara (2003).

In a subsequent research, Demetriades and Hussein (1996) investigate 16 less developed countries between 1960 and 1990 with the aid of time series technique. They uncover a long run relationship for indicators of financial development and per capita GDP in 13 countries. However, they find bi-directional causality in six countries and reverse causality in six countries while South Africa showed no evidence of causation between the variables. Similar views are expressed by Odedokun (1998), Demetriades and Andrianova (2004), Shan and Jianhong (2006), recent researches on the finance and growth nexus report broken link. Demetriades and James (2011) in a study of eighteen Sub-Saharan African countries reports that the link between credit and growth is altogether absent while finance does not lead growth in the long run. Similar views are reported by Estrada et al. (2010) and Kumar (2011).
From the foregoing, empirical findings on causal relationship between finance and growth is unsettled hence this research will examine this for Nigeria.

2. INDICATORS OF FINANCIAL DEVELOPMENT AND ECONOMIC GROWTH

Several measures of financial development are used in literature including Private Sector Credit, Liquid Liabilities, total domestic credit etc. Some recent studies use component variable obtained from a combination of these variables. Our observation shows that the version used always includes credit to the private sector (Allen & Ndikumama, 1998; King & Levine, 1993; Beck et al., 2005; Crowley, 2008). The plausible reason proffered is that credit to the public sector is weak in generating growth within the economy because they are prone to waste and politically motivated programmes. (Beck et al., 2005; Levine, 2002; Odedokun, 1998; King & Levine, 1993).

Credit is not the only factor promoting growth within the economy. Frankel and Romer (1999) establish the importance of trade in generating growth within the economy. They opine that trade proxied by total exports has a quantitatively large and robust positive effect on income. They find that a rise of one percentage point in the ratio of trade to GDP increases income per person by at least one-half percent. Trade accounts for a sizeable proportion of GDP for Nigeria and increases over the years. Specifically, real exports which accounted for about 10% of GDP in 1970, increased to over 50% by 2004 with the highest percentage increase of 59% in 2000.

Likewise, the Nigerian economy in the past three decades has witnessed a drift from a multi-product agrarian economy to a mono-product oil dependent economy. By 2005, oil export increased to 98.3% from the 57.6% maintained in 1970 while non-oil export reduced to 1.7% from 42.4% respectively over the same period.

The significance of foreign inflows in enhancing credit growth has also been widely discussed in literature, but there seems to be no consensus opinion about the effect so far. Crowley (2007b) finds that foreign inflows are significant for growth of credit in Slovak Republic; a view upheld by other researchers (Arvai, 2005; Duenwald et al., 2005). However, Cottarelli et al. (2003) posited that domestic savings flows rather than foreign inflow is the main factor responsible for the growth of credit in Eastern Europe. They found no evidence to support the importance of foreign inflows in stimulating credit growth.

In conclusion, many studies support the existence of a long run relationship between finance and economic growth, though there are some contrary evidences. This paper will examine the effect of bank credit on economic growth and determine the direction of causation for Nigeria. It shall also investigate the contribution of trade (including oil and non-oil exports) and foreign inflows to the growth of the economy.

3. DATA, ANALYTICAL METHOD AND MODEL FORMULATION

In this paper, Engle Granger and Johansen based ECM method is used in establishing the direction of causality. According to Demetriades and Andrianova (2003), it allows the use of appropriate statistical procedures, such as cointegration to test for the long run relationships. Demetriades and Hussein (1996) explain that both Engle/Granger and Johansen based ECM are useful in determining the direction of causality between variables in a series. Where there is conflict, the result of Johansen based ECM is accorded more importance because the Wald tests based on the levels VAR approach are, at best, only valid asymptotically (Toda & Phillips, 1993). Davis and Madsen (2008) further explain that Granger causality does not give proof on causality. According to them, it is only useful in assessing whether there is a consistent pattern of shifts in one variable preceding the other. It is mainly useful in establishing grounds for further investigation. Nonetheless, both methods will still be used in this study.

The paper is divided into two parts. The first part analyses the significance of bank credit on growth, while the second part identifies the factors that drives credit growth.

3.1 Model 1—Is Financial Development Important for Growth in the Nigerian Economy?

The equation that is tested for causation is presented below. Two measures of financial development are used. They are the ratio of bank deposit liability to nominal GDP (D), which captures the broad money stock excluding currency in circulation. The second measure of financial development is the ratio of bank claims on the private sector to nominal GDP (F), which is used to capture the extent of financial intermediation. The argument is that increase in bank deposit liability does not lead to increase in credit to the private sector. The indicator for economic growth is real GDP per capita (G) measured in domestic currency. All the variables are in natural logarithms. Each variable of financial development is tested against the single proxy for economic growth with a view to establish the extent of financial deepening in Nigeria.

The ECM model tested is:  
\[ \Delta \text{LG}_t = \mu + \Gamma(L) \Delta \text{LG}_{t-1} + P_{LG} + \epsilon_t \]

where \( LG \) represents Log of GDP per Capita; \( \mu \) represents the constant; \( \Gamma(L) \) are polynomials of the order of \( k-2 \); \( P \) are polynomials of the order of \( k-1 \) and \( \epsilon \) is the error term. The same model applies to other variables namely LF which represents log of bank credit and LD representing log of bank deposits.
To test each proxy of financial development against the proxy for economic growth, bivariate models of LG & LF and LG & LD respectively is used. The above ECM model is re-written for each proxy of financial development to become -

\[ \Delta \text{LG}_t = \mu + \beta_{1t} \Delta \text{LG}_{t-1} + \beta_{12} \Delta \text{LF}_{t-1} + \Omega_{1t} \text{LG}_{t-1} + \Omega_{12} \text{LF}_{t-1} + \varepsilon_t \] --- model 1a

\[ \Delta \text{LG}_t = \mu + \beta_{1t} \Delta \text{LG}_{t-1} + \beta_{12} \Delta \text{LD}_{t-1} + \Omega_{1t} \text{LG}_{t-1} + \Omega_{12} \text{LD}_{t-1} + \varepsilon_t \] --- model 1b

Models 1a and 1b will provide a solution to the research question on the significance of financial development in generating growth within the economy.

### 3.2 Estimation and Interpretation of Results for Model 1

The ADF test conducted for the variables show that all the three variables are integrated to the same order. The result for the Johansen method for establishing cointegration is presented in Table 1 below.

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Johansen Cointegration Tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variables</td>
<td>Trace Statistics</td>
</tr>
<tr>
<td></td>
<td>k=1</td>
</tr>
<tr>
<td>LG, LD</td>
<td>23.77*** 20.60*** 15.89*** 16.38***</td>
</tr>
<tr>
<td>LG, LF</td>
<td>23.12*** 17.25** 14.66* 16.05**</td>
</tr>
</tbody>
</table>

LG – log of GDP per Capita, LD – log of Ratio of Bank Deposit to GDP, LF – log of Ratio of Private Sector Deposit to GDP; K= number of lags; Results are based on one lag of each variable. Null hypothesis: \( r=0 \); Alternative: \( r=1 \); while *, ** and *** means significance at 10%, 5% and 1% levels respectively.

The result of the short run Granger Causality test in Table 2 below shows that there is no relationship between the two pairs of variables in the short run. Despite this observation, the findings cannot be conclusive; it only serves as a starting point for further empirical tests, which the Johansen ECM method intends to accomplish.

<table>
<thead>
<tr>
<th>Table 2</th>
<th>Results of Short run Granger Causality test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variables</td>
<td>Outcome</td>
</tr>
<tr>
<td>LG → LF</td>
<td>Null Hypothesis accepted</td>
</tr>
<tr>
<td>LG → LD</td>
<td>Null Hypothesis accepted</td>
</tr>
</tbody>
</table>

Hypothesis: - Null: no causation; Alternate: causation; K= number of lags =2; N = 33;

### Table 3 Results of ECM Tests with Johansen Cointegrating Vectors Between LG and LF; LG and LD

<table>
<thead>
<tr>
<th>Variables</th>
<th>( \beta_{12} = 0 )</th>
<th>( \alpha_{1} = 0 )</th>
<th>( \beta_{1} = \alpha_{2} = 0 )</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F(k, n)</td>
<td>t(n)</td>
<td>F(k+1, n)</td>
</tr>
<tr>
<td>LG → LF</td>
<td>7.527</td>
<td>6.565***</td>
<td>4.489***</td>
</tr>
<tr>
<td>LG → LD</td>
<td>2.554</td>
<td>7.761***</td>
<td>2.048***</td>
</tr>
</tbody>
</table>

K= number of lags = 1; *** means significance at 1 level; Hypothesis: - Null: no causation; Alternate: causation; n= number of observation = 33; n-2k-2

The result presented in Table 3 shows that the model rejects the hypothesis of no causality at 1% level of significance from real GDP per capita to the two financial development variables in the long run. Where there is a variance in the results of Granger Causality and the Johansen method, the Johansen approach is preferred. This means that real output granger causes financial development at least in the long run. Therefore, this result supports the argument of the demand following hypothesis. Further examinations of the pair of the variables with the system equation using the seemingly unrelated regression method also buttress the above assertion.
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3.3 Model 2 – Factors Determining the Growth of Credit in Nigeria

To establish the factors that drive credit growth, the model developed by Crowley (2008) in the case of credit growth in the Middle East, North Africa and Central Asia region is used. The ECM method is used. Variables are deflated while inflation is excluded. The model that is tested is

\[ \text{Real Private Sector Credit Growth}_{t} = f(\beta_0 + \beta_1 \text{Real Gross Domestic Product Growth}_{t-1} + \beta_2 \text{Real Private Sector Credit Growth}_{t-1} \text{ and } \beta_3 \text{Real Trade Growth}_{t-1} \text{ and } \beta_4 \text{Real Total Capital Account Growth}_{t-1}) \]

where: - \( \beta_0 \) denotes Constant; Real Trade Growth is used to proxy total exports, oil exports, nonoil exports, total imports and net trade while Real Total Capital Flow is used to proxy foreign capital flow.

Data used are annual, covering thirty six years between 1970 and 2005, and obtained from the International Financial Statistics (IFS) site and the Statistical Bulletin of the Central Bank of Nigeria (December, 2006). The result is presented in Tables 4 and 5 below.

Table 4
ECM Regression Output of Credit Growth, 1970-2005

<table>
<thead>
<tr>
<th>Model No</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>.004</td>
<td>-.009</td>
<td>-.001</td>
<td>-.005</td>
<td>-.002</td>
</tr>
<tr>
<td></td>
<td>(.011)</td>
<td>(.012)</td>
<td>(.010)</td>
<td>(.010)</td>
<td>(.010)</td>
</tr>
<tr>
<td>( \Delta^{\text{RPSCR}} )</td>
<td>-.768</td>
<td>-.524***</td>
<td>-.497***</td>
<td>-.531***</td>
<td>-.466***</td>
</tr>
<tr>
<td></td>
<td>(.151)</td>
<td>(.147)</td>
<td>(.150)</td>
<td>(.112)</td>
<td>(.107)</td>
</tr>
<tr>
<td>( \Delta^{\text{RGDP}} )</td>
<td>.003</td>
<td>.157**</td>
<td>.148**</td>
<td>.135*</td>
<td>.144**</td>
</tr>
<tr>
<td></td>
<td>(.090)</td>
<td>(.074)</td>
<td>(.066)</td>
<td>(.067)</td>
<td>(.067)</td>
</tr>
<tr>
<td>( \Delta^{\text{REXP}} )</td>
<td>-.166***</td>
<td>-.025</td>
<td>-.0002***</td>
<td>.0002***</td>
<td>.0002***</td>
</tr>
<tr>
<td></td>
<td>(.044)</td>
<td>(.038)</td>
<td>(.000)</td>
<td>(.000)</td>
<td>(.000)</td>
</tr>
<tr>
<td>( \Delta^{\text{RCAPAC}} )</td>
<td>.063</td>
<td>.157</td>
<td>-.953***</td>
<td>-.188***</td>
<td>-.040***</td>
</tr>
<tr>
<td></td>
<td>(.039)</td>
<td>(.047)</td>
<td>(.239)</td>
<td>(.047)</td>
<td>(.047)</td>
</tr>
<tr>
<td>ECM ( \Delta_{i} )</td>
<td>-.0002***</td>
<td>.032***</td>
<td>-.019***</td>
<td>.0002***</td>
<td>.0002***</td>
</tr>
<tr>
<td></td>
<td>(.000)</td>
<td>(.009)</td>
<td>(.005)</td>
<td>(.000)</td>
<td>(.000)</td>
</tr>
<tr>
<td>( R^2 )</td>
<td>.648</td>
<td>.666</td>
<td>.742</td>
<td>.739</td>
<td>.730</td>
</tr>
<tr>
<td>DW</td>
<td>1.952</td>
<td>2.216</td>
<td>2.078</td>
<td>2.001</td>
<td>2.041</td>
</tr>
</tbody>
</table>

Note: Figures in parenthesis ( ) are the standard errors of the variable while ***; ** and * depicts 1%; 5% and 10% level of significance for the coefficients respectively. The symbol of * in the diagnostic section denotes significance at 5% or 10% level.

KEY: RPSCR is Real Private Sector Credit; RGDP is Real Gross Domestic Product; REXP is Real Total Export; RCAPAC is Real Total Capital Flow; RIMP is Real Import.

Table 5
Diagnostic Tests for the Above Regressions

<table>
<thead>
<tr>
<th>Model No</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>LM Test</td>
<td>.619</td>
<td>1.508</td>
<td>.411</td>
<td>.084</td>
<td>.267</td>
</tr>
<tr>
<td></td>
<td>(.431)</td>
<td>(.219)</td>
<td>(.521)</td>
<td>(.771)</td>
<td>(.606)</td>
</tr>
<tr>
<td>Ramsey</td>
<td>.305</td>
<td>3.016*</td>
<td>.033</td>
<td>.255</td>
<td>.139</td>
</tr>
<tr>
<td></td>
<td>(.580)</td>
<td>(.082)</td>
<td>(.855)</td>
<td>(.613)</td>
<td>(.710)</td>
</tr>
<tr>
<td>Normality</td>
<td>.494</td>
<td>.367</td>
<td>3.899</td>
<td>5.734*</td>
<td>4.121</td>
</tr>
<tr>
<td></td>
<td>(.781)</td>
<td>(.832)</td>
<td>(.142)</td>
<td>(.057)</td>
<td>(.127)</td>
</tr>
<tr>
<td>Hetero</td>
<td>2.246</td>
<td>.042</td>
<td>.778</td>
<td>.971</td>
<td>.710</td>
</tr>
<tr>
<td></td>
<td>(.134)</td>
<td>(.837)</td>
<td>(.378)</td>
<td>(.324)</td>
<td>(.399)</td>
</tr>
</tbody>
</table>

3.4 Interpretation of Results for Model 2

Table 4 consists of five regressions in a stepwise order. Almost all the models satisfy the Ordinary Least Square requirements. The coefficient for the intercept is very tiny, negative and insignificant for all the results except model A, which is positive, though still tiny and insignificant. This runs contrary to the findings of Crowley (2008) because the coefficient for intercept is large in his results, though not significant. The autoregressive coefficient for real private sector credit growth is negative, large and significant in all the results. As explained earlier, the negative sign is anticipated as it depicts the short run adjustment on the dependent variable. Similarly, the coefficient for real gross domestic product growth is positive and significant in all the regressions while the ECM coefficient is significant in all the models. The significance of the ECM further affirms the existence of long run relationship between the variables and that some adjustments take place within the current period based on the disequilibrium of the previous periods for each model.

The first regression tests a bivariate relationship between real private sector credit growth and real gross domestic product growth. Both variables were not significant, but the ECM coefficient was large and significant at 1%. This suggests that the pair of real private sector credit growth and real gross domestic product growth alone is not sufficient to explain the relationship between financial development and economic growth. It also shows that bivariate model is not appropriate to
explain the relationship between finance and growth. For model B, export is added to the bivariate regression (model A). Both real private sector credit growth and real export growth were significant at 1% with a large coefficient of -0.524 for real private sector credit growth and small coefficient of -0.166 for real total export growth respectively. The ECM is significant at 1% while real output is significant at 5%. This result runs contrary to the findings of Crowley because real total export growth is not significant in his study. Rather, it affirms the findings by Frankel and Romer (1999) that exports are significant for financial development, though in this case shows an inverse relationship. In model C, real capital inflow is added to model B. Both real private sector credit and real GDP follow the same pattern as explained in model B. However, real export is insignificant with a negative coefficient while real capital inflow has a tiny coefficient, but significant at 1%. The ECM coefficient is -0.40 which implies that the speed of adjustment will take about 1 day. For model D, model C is modified by replacing real export with real import. Both real private sector credit and real GDP follow similar pattern as explained above, though real GDP is now significant at 10%. The replacement of real exports with real imports to model C makes no significant change to the result. This observation affirms the importance of foreign inflow as a significant variable in stimulating financial development. The coefficient of real import is positive, but not significant while the coefficient for real capital inflow is not different from the model C (with the inclusion of real exports).

Model E is presented by excluding real import from model D. All the variables were significant including the ECM at 1%, while R² and DW were about 73% and 2.041 respectively. The coefficient of real capital flow does not exhibit any significant change from that of models C and D. The coefficient for real private sector credit growth was large at -0.466. This shows that foreign capital flow is highly significant in enhancing credit growth within the economy, though the coefficient is tiny. The findings show that a one percent increases in real total capital flow will cause about three basis point increase in real private sector credit. This is different from the findings of Crowley (2008) who finds that foreign capital flow was not significant. However, the result supports the findings of Arvai (2005) and Duenwald et al. (2005) that foreign inflows are important in driving credit growth. In view of this, I postulate that real capital inflow is the single variable that exerts significant impact on financial development with or without real export or real import in Nigeria.

As earlier stated, when total exports growth is included in model C, there was no appreciable change to the result presented for model E while total export growth was not significant. The insignificance of real total exports makes it impossible to estimate the effect on the growth of credit within the economy. One tends to question the importance of export as a variable in buttressing financial intermediation within this country. A graph representing the relationship is presented in Figure 1 below:

![Figure 1: Percentage of Bank Financed and Total Export to GDP 1970-2006](source)

From this graphical illustration, it can be seen that a very insignificant proportion of total exports was financed by bank credit, hence the situation depicted in the model. A possible explanation is that exports from Nigeria are mainly crude oil, which the multi-national companies handle. They source for their funding from outside the country. The proceeds from these exports are possibly not available for intermediation by the financial system because the Central Bank of Nigeria who is the banker to the government collects the proceeds for the government accounts. Both the supply and demand aspect of exports finance is not available for financial intermediation.
exports can only be significant for economic growth when it is properly intermediated into the financial system. This therefore explains why real total capital flow may be better in explaining financial development in Nigeria than real total exports.

From the above discussion, regression five seems the one that best explains the relationship between financial development and economic growth. A critical observation in the result is that the coefficient for real private sector credit is negative in all the results, and is in agreement with the findings by Crowley (2008). This observation made us to present both real private sector credit growth and real gross domestic product growth in Figure 2 below. The graph also reveals that real gross domestic product growth exceeds real private sector credit growth. This in contrary to Crowley’s (2008) finding that private sector growth exceeds gross domestic product growth in almost all the 23 MDC countries. Thus, I can postulate that the economy is growing faster than credit availability. This may be a reason for the reverse causation observed earlier.

![Figure 2](#)

**Figure 2**

Graph of Real GDP Growth and Real Private Sector Credit Growth 1970-2005

Source: Data from IFS Database

From the result of regression five, it emerges that a unit change in output results in about 14% change in real private sector credit. The low impact can be attributable to the short tenure of deposit money banks’ credit (presented in figure 3 below). This observation may explain the reduction in the ability of such credits to impact positively on the economy.

![Figure 3](#)

**Figure 3**

Maturity Structure of Bank Loans in Nigeria 1970-1996

Source: Data from CBN Statistical Bulletin 2006; Date limited because requirement for such disclosure was abolished since 1996
Despite observing foreign capital flow as a very significant variable in stimulating financial intermediation within Nigeria, it exhibits high volatility. This suggests that it cannot sustain the financial system. The country needs to ensure positive and significant relationship between total exports and financial development. Banks in the country need to be properly integrated into the financing of oil export which accounts for a significant aspect of the country’s total export. This will assist the country to depend less on foreign capital flow, which exhibits high volatility, but on a more stable total export proceeds.

CONCLUSION

In this paper, the significance of economic growth variables in affecting the level of intermediation within the Nigerian economy is analysed and observed reverse causation between real output and financial development. For factors that influence credit growth, trade variable measured by total exports and export of oil (which accounts for a significant aspect of the country’s total exports) all measured in real terms are not adequate and sufficient for the development of the financial sector within the country. Real total capital flow, export of non-oil and total import all measured in real terms are good in explaining this relationship.

The inability of exports to explain this relationship is attributed to the insignificant percentage of exports that is funded by the financial industry. The government needs to ensure proper integration of the financial sector to be capable of substantially intermediating in the financing processes for the real sectors of the economy.

The results also suggest that real total capital flow has been highly volatile, which possibly accounted for the volatility in real private sector credit growth. Therefore, the country should ensure that the financial system intermediates for both the supply and demand aspects of export finance. This will ensure the relevance of trade variables in explaining the relationship that exists between economic growth variables and financial development. Similarly, they will need to intensify their efforts to improve non-oil exports, which have reduced drastically from 49.6% in 1970 to 1.7% in 2005. A sizeable improvement in this area will assist the relevance of this variable in explaining the relationship therein.

Finally, the results reveal that for the purpose of financial development in Nigeria, it is not where the economic activity (exports) is originating from that develops, but where intermediation for that economic activity originates from that eventually develops.

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