

Full Length Research Paper

The effect of trade components on financial development in Nigeria

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Abstract

This paper examines the importance of trade to impact the financial sector positively. The study uses ECM method and find that exports (which are a major economic activity with heavy reliance on oil-exports), are not very good in stimulating financial development. A further probe of decomposing exports to oil and non-oil reveals that non-oil exports is able to explain the relationship better while oil exports suggests an inverse relationship. Imports was also included and seems to support financial development more than oil exports that accounts for over 98% of total exports within the country. The result suggests a weak link between real economic activity and financial institutions and the need for better integration of proceeds into the financial system.

Keywords: Trade Components, Financial Development, Nigeria.

INTRODUCTION

The discovery of crude oil in the early 70's has had significant effect on the growth of the economy. Consequently, there has been 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. The increase in government expenditure and increasing level of corruption made many farmers forgo farming and search for better living standard in the cities. Subsequent attempt by the government to reverse this trend has not been successful to date. The scenario is presented in the figure 1 below showing the country's export of oil and non-oil items from 1970 to 2008. Oil exports show a rising trend most especially from the 1990's until date while non-oil export does not show any remarkable change. This implies that oil is the major component of exports for the country. The situation also applies to the balance of trade for oil and non-oil in figure 2 with the latter showing declining trend each year. It has been negative since 1994 with a declining trend until date. Despite this scenario, the country is not poised to change this unfortunate trend.

As a result of these issues, the country has over time turned into a public sector driven economy with most citizens looking to the government for virtually all aspects of their welfare.

The study by Frankel and Romer (1999) established

The importance of trade in generating growth within the economy. In their view, 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. This they believe happens because trade appears to raise income by spurring the accumulation of physical and human capital; thereby increasing output for given levels of capital. Nigeria is a country that has foreign trade accounting for a sizeable proportion of GDP. A perusal of the ratio of real exports to real GDP reveals that real exports which accounted for about 10% of GDP in 1970, increased to over 50% by 2004 with the highest percentage increase in 2000 at 59%. Based on the postulation of Frankel and Romer (1999) above, it is important to investigate the effect of such an increase, which is in excess of 300% between 1970 and 2006, to the growth of the economy.

As earlier stated, 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. Available data shows 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. Thus researchers posit that oil

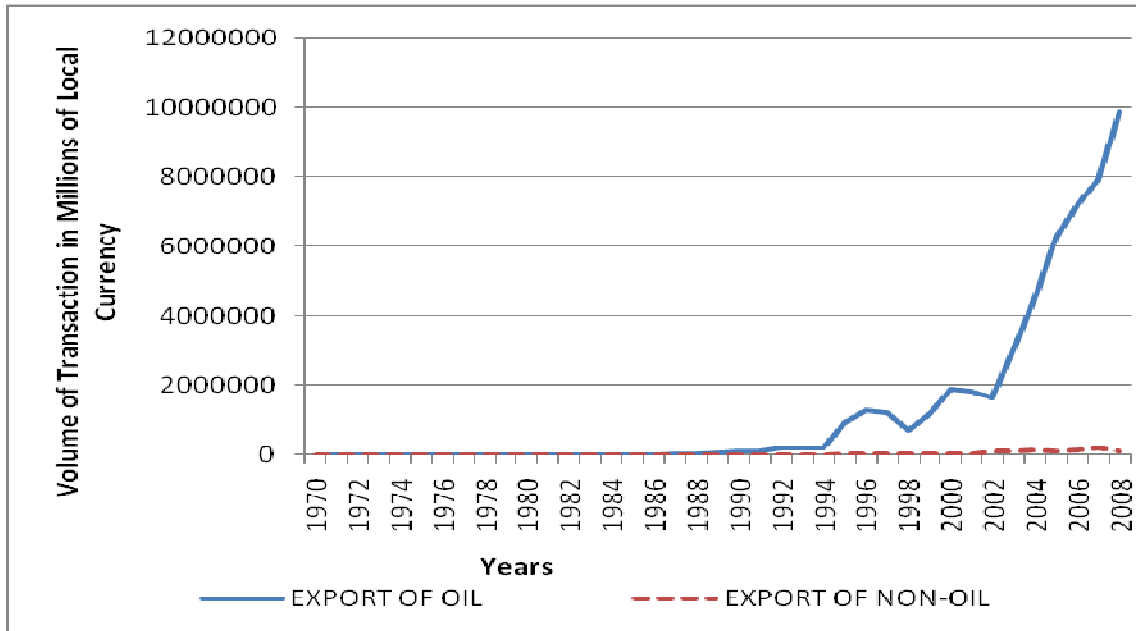


Figure 1. Export of Oil and Non-Oil from Nigeria (1970 – 2008)
 Source: - Data from CBN Statistical Bulletin 2009

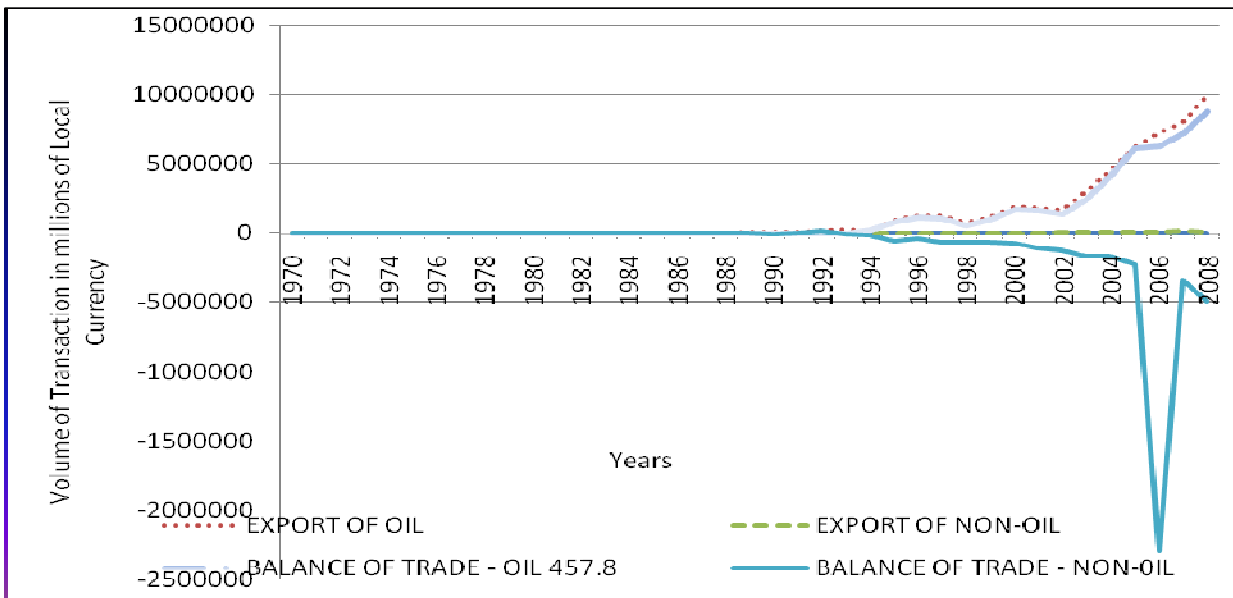


Figure 2. Total Exports and Balance of Trade for Oil and Non-Oil in Nigeria
 Source: - Data from CBN Statistical Bulletin 2009

export impacts credit growth directly by providing wealth and liquidity in the exporting countries (Crowley, 2008). This paper analyses the effect of the increase in exports over the years on the development of the financial system.

The empirical analysis in this paper examines the role that exports and its various components play in facilitating financial development of the country.

Model Specification - Is Exports significant for Financial Development in Nigeria?

To avoid the bias of using bivariate framework in estimation as stated by Lucas (1988) and Al-Yousif (1999) due to possible omission of variables, the multivariate model developed by Tang (2003) is applied for the study. The model tested is: -

Table 1. Unit Root Tests for ΔLY , ΔLC , ΔLX , ΔLG , ΔLD and ΔLF

H ₀ : unit root: H ₁ : no unit root			
Variables	ΔLY	ΔLC	ΔLX
DF	-7.044*	-6.132*	-7.488*
ADF	-4.905*	-4.118*	-4.128*

LY means log of Real GDP; LC means log of Real Private Sector Credit. LX means log of Real Total Exports.. Δ means growth in the real variable

Table 2. ECM REGRESSION RESULT 1970-2005

Model No / Dependent Variable	2b/ ΔLC_{t-1}
Intercept	-0.009 (0.474)
$\Delta^2 LC_{t-1}$	-0.524** (0.001)
$\Delta^3 LY_{t-1}$	0.157* (0.042)
$\Delta^2 LX_{t-1}$	-0.166** (0.001)
ECM	-0.188** (0.000)
R2	0.666
DW	2.216
DIAGNOSTIC TESTS	
LM Test	1.508 (0.219)
Ramsey	0.316 (0.582)
Normality	0.367 (0.832)
Heteroscedasticity	0.042 (0.837)

LY means log of Real GDP; LC means log of Real Private Sector Credit; LX means log of Real Total Exports while Δ means growth in the real variable. Figures in parenthesis represent the p-values of the variables in the regression while ** and * depicts 1% and 5% level of significance for the coefficients respectively. * in the diagnostic section denotes significance at 5% level

$$LC_t = \beta_3 + \beta_9 LY_{t-1} + \beta_{10} LX_{t-1} + \varepsilon_t$$

Where: - LC = Log of Real Private Sector Credit growth

LY = Log of Real Gross Domestic Product growth

LX = Log of Real Total Export growth

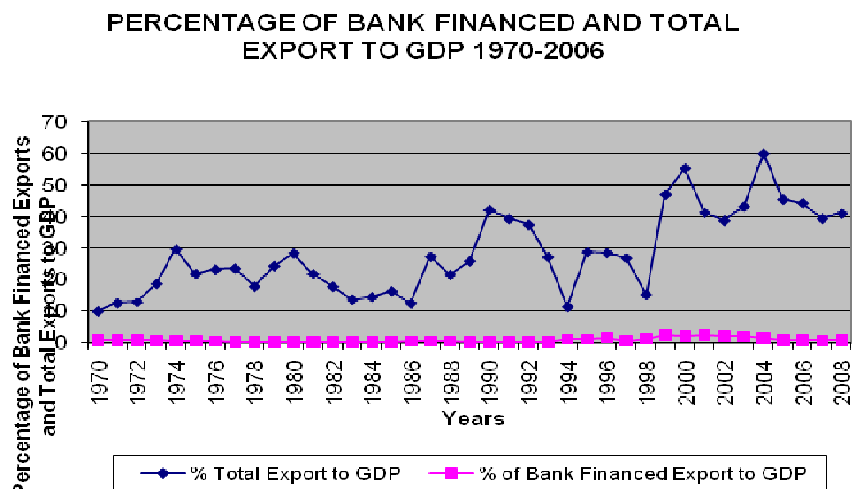
β_0 and ε_t are the constant and the error terms respectively

Many empirical studies have postulated that private sector credit is a better stimulant for growth rather than other forms of credit (Levine 2002; Odedokun 1998). As earlier stated, a country that develops the private sector is more likely to witness growth than that where the large chunk of the credit goes to the public sector. Against this background, we make use of credit to the private

sector as a measure of bank credit.

DATA AND ANALYSIS

The data used in this study are annual, covering a period of 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 model uses real values of the variables and the Error Correction Method (ECM) to determine the relationship. Private Sector Credit is the dependant variable and the result presented in Table 2 above.

Figure 3. Percentages of Bank Financed Exports and Total Exports to GDP (1970 –2008)

Source: - Data from CBN Statistical Bulletin 2009

Unit root tests is conducted to establish the order of integration of the variable. The ADF test conducted for the variables shows that the series are integrated to the order of one hence $I(1)$.

In estimating the model, the ECM method is used to analyse the relationship. The result for the estimation of the model is presented below. The result shows an inverse relationship between finance and exports.

INTERPRETATION OF RESULT

In the error correction model (ECM) regression result, all the variables included except the intercept are significant. This implies that the lag of credit to the private sector, output and exports are important in stimulating financial development. The ecm coefficient (0.188) is large and significant at 1%. This implies that it will take about two months for the adjustment done in the regression to take place. However, the coefficient for export is negative. This runs contrary to literature, but can be explained as the outcome of the resource curse effect on the country. The leaders siphon most of the exports proceeds while the remaining does not pass through the deposit money banks that are the main engine for financial intermediation in the country. Most of the funds siphoned are kept in banks outside the country while others keep their loot within the country, but away from the local banks, as they are not willing to account for the source of such funds if called upon to do so. This model satisfies all ordinary least square assumptions.

Due to the observation in the result above, a further probe is done to examine why the coefficient for trade is negative in the result. This is done by dividing exports of the country into oil export and non-oil export and regressed them separately. As earlier stated, the

Nigerian economy has had the percentage contribution of oil and non-oil to total export increased and reduced from 57.6% and 42.4% in 1970 to 98.3% and 1.7% by 2005 respectively. It is possible that this approach will shed more light on the situation.

The result presented in table 3 above shows that the coefficient of oil export is negative and significant at 5% while that of non-oil export is positive and significant at 5% too. With this result, it shows that export of oil is responsible for the negative coefficient observed in this study. This may suggest that while export of non-oil passes through the intermediation process, which aids financial development, export of oil, misses this process due to the reasons earlier discussed in this study. Imports is later included as a trade variable as the third regression (being a trade component). The result for the inclusion of imports is better than that with oil exports because imports has a positive relationship (as expected) with financial development. The explanation is similar to that of non-oil exports.

The result presented above seems to question the importance of export (largely dominated by oil exports) as a variable in buttressing financial intermediation within this country. A graph representing the relationship is presented in figure 3 below:

From this graphical illustration, it can be seen that a very insignificant portion of total exports was financed by bank credit (this supports our explanation for the negative coefficient), 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 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

Table 3. ECM REGRESSION OUTPUT FOR OIL, NON-OIL EXPORTS AND IMPORTS WITH CREDIT GROWTH AS DEPENDENT VARIABLE (1970-2005)

Model No	6	7	8
Intercept	-0.006 (0.649)	-0.010 (0.422)	0.004 (0.785)
Δ^2 LC	-0.659** (0.000)	-0.262 (0.087)	-0.512** (0.002)
Δ^2 LY	0.241** (0.006)	0.077 (0.371)	0.213* (0.013)
Δ^2 LXO	-0.147## (0.011)		
Δ^2 LXN		1.837* (0.034)	
Δ^2 LMP			0.142* (0.012)
ECM _{t-1}	0.171* (0.021)	-0.608** (0.001)	-0.023 (0.506)
R ²	0.571	0.631	0.581
DW	2.314	2.180	2.208

DIAGNOSTIC TESTS			
Model No	6	7	8
LM Test	4.450* (0.035)	1.627 (0.202)	0.649 (0.420)
Ramsey	1.030 (0.310)	0.117 (0.733)	2.128 (0.145)
Normality	1.487 (0.476)	0.996 (0.608)	0.956 (0.620)
Hetero	1.950 (0.163)	0.206 (0.650)	0.964 (0.326)

Note: Figures in parenthesis () are the p-values of the variables. The symbols of ** and * depicts 1% and 5% level of significance for the coefficients and with the expected sign while ## and # also denotes significance at 1% and 5% level of significance but the sign of the coefficient does not tally with the literature. The symbol of * in the diagnostic section denotes significance at 5% or 10% level.

KEY: - RPSCR is Real Private Sector Credit; REXPOIL is Real Export of Oil; RGDP is Real Gross Domestic Product; REXPNOIL is Real Export of Non Oil; RIMP is Real Import.

accounts. As such both the supply and demand aspect of exports finance is not available for financial intermediation. Total exports can only be significant for financial development when it is properly intermediated into the financial system. This explains why real total capital flow may be better in explaining financial development in Nigeria than real total exports. The explanation is in addition to the natural resource curse earlier stated above.

CONCLUSION

This paper examines the significance of trade in affecting the level of intermediation within the Nigerian economy. The results show that contrary to previous studies, trade variable measured by total exports and export of oil (which accounts for a significant aspect of the country's total exports) does not support the development of the financial sector. Export of non-oil and Imports are good in explaining this relationship.

The inability of exports to explain this relationship relates to the very insignificant percentage of exports funded by the financial industry and the natural resource curse argument. A large percentage of the country's exports are oil based which foreign multi-nationals who source their funds from outside the country dominate. Therefore, the intermediation role by banks in export finance is negligible. When they collect export proceeds, the government spends it, through the Central Bank who acts as the medium for both collection of proceeds and expenditure. This means that both the supply and demand for exports funding do not pass through the deposit money banks that are well positioned to intermediate for the real sector. Similarly, the level of corruption which sees some of the export proceeds diverted for personal reasons also accounts for this scenario. 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.

Finally, our 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 develops. The result for Nigeria is puzzling, and depicts the under development nature of Nigeria.

REFERENCES

- Allen DS, Ndikumana L (1998). "Financial Intermediation and Economic Growth in Southern Africa" Working Paper Series 1998-004, The Federal Reserve Bank of ST. Louis
- Al-Yousif YK (1999). "On the role of exports in the economic growth of Malaysia: A multivariate analysis" *Int. Econ. J.* 13, 3, pp 67-75
- Beck T, Cull R, Jerome AT (2005). "Bank Privatization and Performance: Empirical Evidence from Nigeria" World Bank Policy Research Working Paper No: 3511
- Crowley J (2007). "Credit Growth in Slovak Republic" Technical Note to the FSAP Update.
- Crowley J (2008). "Credit Growth in the Middle EAST, North Africa and Central Asia Region" IMF Working Paper No: 08/184
- Frankel J, Romer D (1999). "Does trade cause Growth" *American Economic Review* 89 pp 379-399
- Goldsmith RW (1969). "Financial Structure and Development". Yale University Press, New Haven, Ct.
- Gross MD (2001). "Financial Intermediation: A Contributing Factor to Economic Growth and Employment", ILO Working Paper, Vol. 27.
- IMF (2008). "Article IV Consultation with Nigeria" IMF Publication No: 08/16
- IMF (2008). "Global Financial Stability Report" IMF Publication, Autumn
- Levine R (2002). "Bank-Based or Market-Based Financial Systems: Which is Better?" *Journal of Financial Intermediation* 11, 398-428
- Levine R, Loayza N, Beck T (2000). "Financial Intermediation and Economic Growth: Causes and Causality" *J. Monetary Economics* No 46, pp31-77
- Lucas R (1988). "On the Mechanics of Economic Development." *J. Monetary Economics* 22, 2-42.
- Odedokun MO (1998). "Financial intermediation and economic growth in developing countries". *J. Econ. Stud.* 25(3):203 – 224.
- Rioja F, Valev N (2003). "Does One Size Fit All?: A Re-examination of the Finance and Growth Relationship". *J. Dev. Econ.* 74(2):429 – 447.
- Robinson J (1952) "The Generalization of the General Theory." In *The Rate of Interest, and Other Essays*. London: McMillan pp 67-146
- Schumpeter JA (1934). "The Theory of Economic Development". Translated by Redvers Opie, Cambridge MA: Harvard University Pres.
- Tang TC (2003). "Bank lending and Economic growth in Malaysia: Revisited" *Analysis* 10 (1), pp. 69-87
- Tang TC (2003). "Directions of Bank Lending and Malaysian Economic Development: An Empirical Study" *Int. J. Manage.* 20, 3, pp 342