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Nexus between Financial System Development and Economic Performance of Developing Economies: Perspective of the Nigerian Economic Growth

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Abstract:

The interrelationship between financial system development and the economic growth of the Nigeria has been studied through this work. A times pan from 1990-2020 has been selected here. The financial development index and money supply (MS) had positive and non-significant impact on the real GDP. The following recommendations were made based on results of the study; that the monetary authority should repeal the financial inclusion secretariat with financial system development secretariat to broaden policies on financial inclusion and entrench the depth, access and efficiency of the financial system, policies on cyber security should be pursued vigorously to afloat contemporary issues in global financial system and plausible monetary tools embraced for optimal money supply in the economy.

Keywords: Financial system development, emerging economies and economic growth

1. Introduction

Financial system development is generally regarded as a critical economic propeller and pathway to economic growth and development. As the economic hub of nations and a veritable tool for the attainment of sustainable economy, financial system development has been a global phenomenon and its development plays catalytic role especially in emerging economies. Ighoroje and Egedi (2015) assert that the Nigerian economy revolves round the hub of an active financial system. The financial system has witnessed colossal dynamism over time brought by financial performance and innovative practices especially in the emerging markets like Nigeria. The developments in the financial sector have not only led to the increase in the number of financial institutions, but also the development in level of sophistication with new payment systems and alternatives to holding money. This has resulted mainly from technological advancement and increase in competition as the number of institutions increase (Kibaara, 2015). Hayat and Ahmad (2018) states that establishing the relationship between financial development and economic growth has been of great interest to researchers for few decades and that the developing countries government is currently committed that economic growth can only be possible with the help of developing financial sector. Ebiringa, and Duruibe (2015) emphasize that a number of studies have documented evidences proving that financial system development plays a fundamental role in the economic growth of countries. However, existing studies explored segmented component of the financial system development and focused eitheron a specific financial institution or financial market and developed economies limiting the area of coverage and leaving the aggregate financial system unrivaled and lacuna on the emerging economies like Nigeria. Consequently, the paper assesses the relationship between financial system developments on the Nigerian economic growth.

2. Literature Review

Financial system development is the measure of aggregate performance for most of the financial institutions. The development of the financial system manifests in many folds for performance evaluation of the participants and relevant stakeholders. This development is measured by the performance indicators arising from the financial institutions and markets activities compared to benchmark assigned to the country or region based on her economic classification by the global financial regulators and convergence. Financial system development looks in to overall development of financial institutions and markets (Bui, 2020). It provides a broad category of financial services (Loayza, Ouazad and Rancière, 2018). Guru and Yadav (2019) define it as a developmental tool for increasing the size, efficiency and stability of financial institutions and markets. Financial access means the access of the banking system and stock market with banking system and stock market spread throughout the population, including number of bank branches per 100,000 adults, ATMs per

100,000 adults and money agents per 100,000 adults. While, financial efficiency capture the improvements in financial system performance base on the ability of the institutions to provide financial services at low cost and with sustainable revenue, frequently measured by interest rate spread and stock market turnover ratio.

2.1. The Impact of Financial System Development on Development of Economy

The economic importance of financial system development has different intellectual perceptions, but all bored down to sustainable economic growth. Bakar and Sulong(2018) emphasize thata sustainable growth can be achieved through the overall impact of financial sector development. Mwang'onda, Mwaseba and Ngwilizi (2018) posits that financial sector has always been potential ingredient in bringing growth in an economy. Ismail, Ab-Rahim and Pei-Chin (2019) opine that the economic growth of nations is largely dependent on a financial system which is largely built on stable financial development policies.Omofa (2017) avers that financial sector development affects economic growth by lowering transaction cost, providing information from savers to borrower, providing corporate governance; and encouraging specialization through its exchange function. The trend of financial system development and Nigerian economic growth was presented in Figure 1 below.



Figure 1: Authors' Figure ICAL Presentation of Financial System Development Index (FDI) and the Real GDP in Nigeria, 1990-2020

A glance at Figure 1 above depicts no linear relationship between financial system development index (FDI) and the real gross domestic product (RGDP). While the RGDP aggregate movements revealed average growth of 4.87%, FDI recorded 0.87% leaving a glaring gap of 4% spanning from RGDP to FDI. The slopes in FDI and RGDP shows parallel movements, as FDI fluctuates even below the minimal basic point, the RGDP maintained positive trend throughout the period except in 1991, 2016 and 2020 by -0.55%, -1.58% and -6.1% declines respectively. 2016 decline in RGDP was attributed to the impact lag of 2015 general election and subsequent power transition in Nigeria while that of 2020 was of COVID- 19 pandemic. Whereas FDI trend recorded inconsistent movements along the vertical and horizontal axis, RGDP recorded 2.19%, 1.57%, 0.26%, 1.87%, 4.05%, 2.89%, 2.5%, 0.52%, 5.52%, 6.67%, 14.6%, 9.5%, 10.44%, and 7.01% in 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, and 2005 respectively. Others include, 6.73% in 2006, 7.32% in 2007, 7.2% in 2008, 8.35% in 2009, 9.54% in 2010, 5.31% in 2011, 4.21% in 2012, 5.49% in 2013, 6.22% in 2014, 2.79% in 2015, 0.82% in 2017, 1.91% in 2018 and 2.27% in 2019 before dampening by -6.1% in 2020. This economic growth proxied by the RGDP was attributed to various macroeconomic policies of government, but RGDP failed drastically in 2020 due severe economic recession from COVID-19 pandemic. The growth rates along the FDI and RGDP lines revealed no correlation with the variables, and contradictsKumar and Paramanik (2020) thata welldeveloped financial system enhances capital formation and efficient resource allocation, which in turn triggers economic growth and Chen et al. (2020) that the above mentioned impact has proven considerably worthy.

Theoretically, supply leading and demand following theoryexplained the casual relationship between financial system development and economic growth. Demand following contends that finance is led, rather than leads economic growth, while supply leading contends that financial sector development is a necessary pre-condition for economic growth (Chandrashekar, Sampath and Chittedi, 2018). The development of the financial sector covers savings collection, project valuation, risk management, management control and so on (Omofa, 2017). It also aims to stimulate an entrepreneurial response (Patrick, 1966 in Vieito and Wong, 2018) in these modern sectors (Roger et al. 2005 in Omofa, 2017). As per Chow, Vieito and Wong (2018), supply leading relation, on the other hand, posits a causal relationship. Hicks (1969) also highlighted how financial development helps to boost the economic growth. Chandrashekar, Sampath and Chittedi (2018) assertion that supply leading' contends that financial sector development is a necessary pre-condition for economic growth; consequently, finance leads economic growth and causality runs from financial sector development to economic growth. Levine (1996) argued that the majority of theoretical reasoning and empirical evidence suggests a positive financial development and economic growth.

Tariq, Khan and Rahman (2020) and Rahman, Khan and Charfeddine (2020) examined nonlinear relationship between financial development and economic growth in Pakistan. Imoagwu and Ezeanyeji (2019) highlighted that for short run financial development had significant positive relationship with economic growth, negative in the long run. Bogari, (2019) dynamic panel approach and GMM inspected the association among financial development, financial institution quality and economic growth. Yadav (2019) examined this relationship for five major emerging economies: Brazil, Russia, India, China and South (BRICS). Škare, Sinković and Porada-Rochoń (2019) investigated and revealed the existence of finance-economic growth link in Poland. Ismail, Ab-Rahim and Pei-Chin (2019) revealed the exact finding like above for a long run relationship. Haque (2020) selected private sectors for this study and showed that the private sector's GDP had a negative relation with the supply of moneybut positive relation with bank credit. Iwegbu's(2020) ARDL model was effective in stimulating economic growth through investment in portfolios. Chen et al. (2020) Nonlinear ARDL results revealed positive shocks in financial development in the short run. Kumar and Paramanik (2020) NARDL revealed that the long run financial development does impact economic growth positively.

3. Methodology and Data Analysis

Auto retrogressive distribution lag (ARDL) bounds test was adopted in this analysis. The ARDL technique employs a single reduced form equation for determining both short and long run relationship among variables and free of residual correlation since variables stand as a single equation; it is easy to derive the error correction model from simple linear transformation by integrating short run adjustments with long run equilibrium without loss of information. According to Lawal et al. (2016) and Ogwumike and Salisu (2017), ARDL bounds test technique has several advantages over other estimation techniques. It also allows for the variables to have different optimal lags, which is not applicable to other techniques. Therefore, the model was specifies thus:

$$\Delta InRGDPt = \beta 0 + \sum_{\substack{t=0\\n2\\n2}}^{n1} \beta 1 \Delta InRGDPt - 1 + \sum_{\substack{t=0\\t=0}}^{n3} \beta 3 \Delta InMSt - 1 + \phi 1InRGDPt - 1 + \phi 2InFDIt - 1 + \phi 3InMSt - 1 + \epsilon t.$$
(1)

Where: RGDP is the real gross domestic product. FDI and MS represent financial development index and money supply respectively. *In* is the log of the variables. Δ represents the first difference operator. β_0 is the constant term and β_1 , β_2 and β_3 represent the short-run coefficients. ϕ_1 , ϕ_2 and ϕ_3 are the long-run coefficients; n_1 , n_2 and n_3 are the lag length and ϵ trepresent the error term.

Lag	FPE	AIC	SIC	HQIC
0	1149.467	17.06355	17.25386	17.12173
1	1149.467	17.06355	17.25386	17.12173
2	1062.373**	16.93997**	17.17994**	17.01133**

Table 1: Lag Length Selection **Indicates Lag Order Selected by the Criterion

Optimal lag length of two (2) out of a maximum of 2 lag structure as selected by four different criteria was observed in table 1 above, Final Prediction Error (FPE), Akaike information criteria (AIC), Schwarz Information Criterion (SIC) and Hannan-Quinn Information Criterion (HOIC) recorded the least values at the lag length of two. The results of the ARDL bounds testing approach were also shown in table 2 below.

Dependent Variable: RGDP Method: ARDL Date: 06/02/21 Time: 20:07 Sample (adiusted): 1992 2018 Included observations: 27 after adiustments Maximum dependent lags: 2 (Automatic selection) Model selection method: Akaike info criterion (AIC) Dvnamic regressors (2 lags. custom fixed): Fixed regressors: FDI MS C Number of models evalulated: 2 Selected Model: ARDL(2)						
Variable	Coefficient	Std. Error	t-Statistic	Prob.*		
RGDP(-1) RGDP(-2) FDI MS C	1.756365 -0.809801 11503.70 0.064196 -461.6338	0.246405 0.340963 9950.932 0.188040 2242.564	7.127971 -2.375042 1.156043 0.341394 -0.205851	0.0000 0.0267 0.2601 0.7360 0.8388		
R-souared Adiusted R-souared S.E. of regression Sum souared resid Log likelihood F-statistic Prob(F-statistic)	0.997315 0.996827 1062.373 24830013 -223.6897 2043.104 0.000000	Mean dependent var S.D. dependent var Akaike info criterion Schwarz criterion Hannan-Ouinn criter. Durbin-Watson stat		40970.58 18860.34 16.93997 17.17994 17.01133 2.015195		

Table 2: ARDL Result

RGDP = 1.75636469149RGDP (-1) -0.809800550316RGDP (-2) + 11503.7035733FDI + 0.0641955528132MS - 461.633827961CM, P-Value = 0.2601 and 0.7360 > 0.05 critical value, FDI and MS had positive and non-significant impact on RGDP in the short run. This was explained by the positive coefficients value of our explanatory variables (FDI and MS) and the t-statistic less than two in absolute term and corresponding probability value of the t-statistic greater than five percent critical value. The R² as the summary measure that shows how well the sample regression line fits the data equals 0.997315, indicating that 99% variation in RGDP was explained by a change in FDI and MS, and the remaining 0.0001% was explained by variable not included in the model. The adjusted R² takes account of a greater number of regressors if included and it explains 99.6827% variation in the dependent variable.

Variables	F– Statistics	Cointegration
F(RGDP/FDI, MS)	8.464408**	Cointegration
Critical value	Lower Bound	Upper Bound
1%	6.44	6.44
5%	4.6	4.6
10%	3.8	3.8

Table 3: ARDL Bounds Test for Cointegration

Notes: *** Statistical significance at 10% level; ** Statistical significance at 5% level; * Statistical significance at 1% level. The lag length k=2 was selected based on the AIC and SIC.

Table 3 above reveals long run relationship between real GDP and financial system development. This was explained by F-statistic value of 8.464408 greater than integrated order bands (upper bound values) and the t- statistic.



Figure 2: CUSUM Stability Test

The CUSUM in the Figure 2 above was used to test stability of the function as CUSUM plot stays within the critical 5% bounds, that confirms the long run relationship among the variables and stability of the coefficient.

4. Conclusion/Implications of Result and Recommendations

The ARDL results established short run and long run relationship between financial system development and economic growth in Nigeria, reveals that financial development index (FDI) and money supply (MS) had positive and non-significant impact on the real GDP in Nigeria from 1990 to 2020. This implies that units change in the FDI causes a higher proportionate change (11503.70) in the real GDP and a unit change in the MS causes 0.064196change in the real GDP both in the short run and long run and policy implication confirms that development of the financial system remains a veritable instrument for economic growth in emerging economy like Nigeria. Based on the results, the study recommends that the monetary authority should repeal the financial inclusion secretariat with financial system development secretariat to broaden policies on financial inclusion and entrench the depth, access and efficiency of the financial system, policies on cyber security should be pursued vigorously to afloat contemporary issues in global financial system and plausible monetary tools embraced for optimal money supply in the economy.

5. References

- i. Bui, T. N. (2020), Financial Development in Vietnam: An Overview. *Journal of Asian Finance, Economics and Business*, 7(9), 169-178. Doi:10.13106/jafeb.2020.vol7.no9.169
- ii. Bakar, H. O. and Sulong, Z. (2018). The Role of Financial Sector on Economic Growth: Theoretical and Empirical Literature Reviews Analysis. Journal of Global Economics, 6(4), 1-6. DOI: 10.4172/2375-4389.1000309
- iii. Bogari, A. (2019). The Financial development and economic growth nexus: The role of Saudi Arabian financial institutions. *EJBMR, European journal of business and management research,* 1(6), 1-7.

- iv. Chen, H.et al. (2020), The asymmetric influence of financial development on economic growth in Kenya: Evidence from NARDL. SAGE Open, 1-17. DOI:10.1177/2158244019894071
- v. Chandrashekar, R. Sampath, T. andChittedi, K. R. (2018), Financial development, trade openness and growth in India. *Theoretical and Applied Economics, 1(16), 113-124.*
- vi. Chow, S. C., Vieito, J. P. and Wong, W. K. (2018).Do both demand following and supply leading theories hold true indeveloping countries? Munich Personal RePEc Archive
- vii. Ebiringa, O. T. andDuruibe, S. C. (2015). Financial system development and economic growth: Evidence from Nigeria. American Journal of Economics, Finance and Management, 1(5), 329-335 http://www.aiscience.org/journal/ajefm
- viii. Haque, M. I. (2020). The Growth of Private Sector and Financial Development in Saudi Arabia. *Economies*, 8 (39), 1-15. Doi:10.3390/economies8020039
- ix. Ighoroje, J. E. and Egedi, H. (2015). An evaluation of the roles of financial institutions in the development of Nigeria economy. *Global journal of interdisciplinary social sciences*, *4*(*4*), *1-4*.
- x. Iwegbu, O. (2020). Pension Fund, Financial Development and Output Growth in Nigeria. Central Bank of Nigeria Bullion, 44(1), 17-26. http://hdl.handle.net/10419/214893
- xi. Loayza, N. Ouazad, A., and Rancière, R. (2018), financial development, growth, and crisis: Is there a trade-off? National Bureau of Economic Research, NBER working paper series24474.http://www.nber.org/papers/w24474
- xii. Kumar, K. and Paramanik, R. N. (2020), Nexus between Indian economic growth and financial development: A non-linear ARDL Approach. *Journal of Asian Finance, Economics and Business,* 7(6), 109-116. Doi:10.13106/jafeb.2020.vol7.no6.109
- xiii. Levine, R. (1996). Financial development and economic growth: Views and agenda. PolicyResearch working Paper 1678, finance and private sector development division, World Bank policy research department.
- xiv. Lawal, A. I. et al. (2016). Economic growth, financial development and trade openness in Nigeria: An application of the ARDL bound testing approach. *Cogent economics and finance*, 4(1), 1-15. DOI:10.1080/23322039.2016.1258810
- xv. Mwang'onda, E. S., Mwaseba, S. L. andNgwilizi, D. N. (2018). Impact of Financial Sector Development on Economic Growth: Evidence from Tanzania.*International Journal of Economics and Financial Research*, 4(8), 258-265.URL: http://arpgweb.com/?ic=journal&journal=5&info=aims
- xvi. Guru, B. K. and Yadav, I. S. (2019). Financial development and economic growth: panel evidence from BRICS. *Journal of Economics, Finance and Administrative Science*, 24(47), 113-126. DOI 10.1108/JEFAS-12-2017-0125
- xvii. Omofa, M.N.G. (2017) An assessment of the effect of financial sector development on growth and unemployment in Nigeria: 1986-2012. Open Journal of business andmanagement5, 34-50. http://dx.doi.org/10.4236/ojbm.2017.51004
- xviii. Ogwumike, F. O. andSalisu, F. A. (2017), Financial development and economic growth in Nigeria. *Journal of Monetary and Economic Integration*, 12(2), 92-119.
 - xix. Rahman, A. Khan, M. A. and Charfeddine, L. (2020), Financialdevelopment–economic growth nexus in Pakistan: New evidence from the Markov switching model. *Cogent Economics & Finance*, 8(1), 1716446.https://doi.org/10.1080/23322039.2020.1716446
 - xx. Škare, M., Sinković, D. and Porada-Rochoń, M. (2019), Financial development and economic growth in Poland. *Technological and economic development of economy*, 25(2), 103–133.https://doi.org/10.3846/tede.2019.7925
 - xxi. Tariq, R., Khan, M. A. and Rahman, A. (2020). How Does Financial Development Impact Economic Growth in Pakistan?: New Evidence from Threshold Model. *Journal of Asian Finance, Economics and Business, 7(8), 161-173.* Doi:10.13106/jafeb.2020.vol7.no8.161