

Financial development and Economic Performance in Sub Saharan African Nations

Nura Sani Yahaya¹, Hassan Abdullahi², Hafsat Garba Abdullahi³ and Gambo Zakari⁴

^{1,4}*Kano State College of Education and Preliminary studies, Nigeria*

^{2,3}*RMK College of advanced and remedial studies, Tudun Wada. Kano state, Nigeria*

Abstract: This study examines the link among financial progress, energy consumption, FDI, trade and economic performance in 8 selected economies of Sub Saharan African nations (SSA) from 2000 – 2014 using FMOLS technique. The outcome from the cointegration test confirm the long run linkage among the variables. The estimates reveal that financial progress, energy utilization, FDI are positively related with economic performance, while trade openness decelerates on economic progress. However, trade balance is not significant in explaining the variation in GDP in the selected SSA nations. The study suggests that policymakers should formulate advanced financial reform policies for more effective economic growth performance and development in these nations through enhancing credit allocation especially to the rural settings. It is also need for stakeholders to emphasize on the enlightenment campaigns on the proper management of credit for viable investment.

Keywords: Economic growth, financial development, energy use, FDI and FMOLS

I. INTRODUCTION

The global economic outlook in the last decade shows a positive performance with increased investments and productivity in 2016 and the projected annual growth performance of 3.7 percent in 2020 (World Bank, 2016). In advance economies, such as United State, Europe and Asia the economy grew at 2.1 percent annual rate. However, the emerging market and developing countries had 4.7 annual growth in 2018 (IMF, 2018). In recent years, Sub Saharan African economies (SSA) experienced rapid economic growth. For instance, in all the SSA countries Gross domestic product (GDP) rises from 2000 to 2014 expect Swaziland and South Africa whose GDP decline by \$ 0.26 billion and \$ 28.75 billion, respectively. Nigeria had the heights record of GDP with total value of \$ 514.97 billion, South Africa \$ 367.59 billion and Angola \$ 124.91 billion, while Togo and Liberia recorded the lowest GDP value of \$ 4.08 billion and 1.95 billion respectively (WDI, 2017).

Despite the progress in these countries, economic growth performance is not impressive toward enhancing economic development and well-being, as extreme poverty and low level of human development persist in the region (World Bank, 2016). In this regard, financial progress has been argued in facilitating economic performance to uplift financial resources for proper investment and enhancing quality life of people. It is emphasized that financial development induce change in the level of growth and development through

channeling funds to enhance innovations and investments (Claessens & Feijen, 2007). Financial sector progress in emerging economies has been considered as private sector development policy to influence economic performance that results to productive investment and efficient allocation of resource (Kagochi, Al Nasser, & Kebede, 2013). Hence, financial progress may improve productivity, income, standard of living and also reduce level of poverty. Many studies have focus on the influence of financial development in developed economies, however very few studies consider financial progress in developing nations, especially Sub Saharan African economies (SSA). This raised the issue whether, financial development can stimulate economic performance in SSA nations. Thus, the study examine the influence of financial progress on economic performance in SSA nations.

II. LITERATURE REVIEW

Numerous studies have extensively discussed the association among financial progress, energy utilization, FDI, trade openness and economic growth in the literature. For instance, a study by Schumpeter (1911), Goldsmith (1968), Shaw (1973) and McKinnon (1973) have analyzed the association among economic performance and financial progress in the economic research. Schumpeter (1911) emphasized that advanced financial system will induce the use of new technologies through resources allocation to the productive sector. Meanwhile, Patrick (1966) pointed that development of financial sector promote economic growth. Hence, advancement in financial system will improve the capability of the real sector to promote growth, through the efficient allocation of resources. In contrast, Robinson (1952) concluded that growth-led finance.

Similarly, Samargandi, Fidrmuc, and Ghosh (2014) maintained that financial development enhances economic growth of Saudi Arabia. Khoutem, Thouraya, and Kamel (2014) investigate the influence of the indicators of financial development on GDP in Tunisia from 1973 - 2008. The outcome illustrates that indicators of financial performance promote activities of the economy. Meanwhile, Onuonga (2014) studied the link among financial progress and GDP in Kenya by utilizing ARDL approach for the period 1980 to 2011. The outcome confirms that development of the financial system stimulates economic performance. In another development, Ductor and Grechyna (2015) maintained that

development of financial sector in 101 developed reduces economic value. Furthermore, Inglesi-lotz (2015) examines the influence of energy utilization on GDP in 34 OECD nations from 1990 to 2010. Result of the study indicates energy use stimulates economic performance. Their finding is in line with the study by Aslan and Oguz (2016) that consumption of energy enhances economic progress in New EU states.

Almfraji and Almsafir (2014) found that FDI improves the level of economic growth. Iamsiraroj and Ulubaşoğlu (2015) is similar with the outcome of Abbes et al. (2015) that FDI increases GDP. In addition, Tahir and Azid (2015) investigate the association among trade openness with economic performance in 50 emerging nations by applying fixed effect technique from 1990 to 2009. Outcome of the study shows trade openness induces GDP. Various studies have analyzed association among financial progress, energy, trade and economic performance in developed nations. However, very few studies consider financial sector improvement in less developed nations like Sub Sharan African economies. Hence, the study examined the influence of financial progress on economic performance in SSA nations.

III. TECHNIQUE OF ESTIMATION AND DATA

3.1 Data

Eight selected SSA nations are used in the analysis over the period 2000 – 2014. The data are retrieved from WDI. The variables are economic performance (current USD), financial progress (percentage credit/ GDP), energy use (kg of oil equivalent), trade (total exports and imports), FDI (FDI inflows) and Trade balance (exports – imports). Table 1 reveals the descriptive analysis is of the variables used. It reveals that the mean for economic growth obtained the greatest among the variables value and FDI got greatest standard deviation.

Table 1. Descriptive analysis

Variables	Min	Max	Mean	SD	Observation
LEC	5.57	8.99	7.19	0.96	120
LFD	0.69	5.07	3.14	0.91	120
LEC	5.47	7.97	6.33	0.69	120
LTO	3.43	4.83	4.14	0.29	120
LFDI	-7.1	9.89	1.58	2.69	120
LTB	-0.6	0.96	-0.1	0.35	120

3.2 Fully modified ordinary least square method (FMOLS)

A used version of the model from Chien-chiang Lee (2005) for the linkage among economic performance and other variables is illustrate in the following equation.

$$GDP_{it} = \alpha + \beta_1 FD_{it} + \beta_2 EC_{it} + \beta_3 TO_{it} + \beta_4 FDI_{it} + \beta_5 TB_{it} + \varepsilon_{it} \tag{1}$$

In equation (1) GDP, FD, EC, TO, FDI, TB represents economic performance, financial development, energy consumption, trade, foreign direct investment, and trade balance, α and β are the parameter, t is period, i represent each entity and ε is the error term. The study uses fully modified ordinary least square method to determine the long-run association among these variables. FMOLS technique was offered by Pedroni (1996) that eliminates the order bias caused by endogenous regressors.

IV. RESULT

The outcomes of the study are discussed in this part. It reveals that the stationarity test from table 2 that all the variables are stationary at first difference I (1). This indicates that FMOLS technique can be apply for the analysis

Table 2 Panel stationarity test result

Variables	Level		First Diff	
	IPS		IPS	
LEG	1.041	(0.851)	-6.433*	(0.000)
LEC	0.305	(0.620)	-4.347*	(0.000)
LFD	-0.319	(0.374)	-5.771*	(0.000)
LTB	-1.082	(0.139)	-5.334*	(0.000)
LTO	-1.574	(0.123)	-7.209*	(0.000)

Note: * illustrates 1 percent level of significance.

Table 3. Illustrates the results of the Pedroni panel co-integration. The table indicates that hypothesis of no co-integration cannot be rejected for Panel v -statistics, Panel PP-statistics, Panel ADF-statistics, Group PP-statistics and Group ADF-statistics at 1 and 5 percent level of significant. However, the hypothesis of no co-integration is rejected for Panel ρ -statistics and Group ρ -statistics. Therefore, long associations exist among the variables in the samples SSA nations.

Table 3 Pedroni cointegration test

Test	Statistics	Prob.
Panel v -statistics	3.322	0.004*
Panel ρ statistics	3.193	0.999
Panel PP-statistics	-2.847	0.002*
Panel ADF-statistics	-1.825	0.034**
Group ρ -statistics	4.498	1.000
Group PP-statistics	-5.145	0.000*
Group ADF-statistics	-2.001	0.022**

Note: * and ** indicates 1 and 5 percent level of significance

Table 4. Shows the FMOLS estimation. The table indicates that LFD, LEC and FDI are positive and significant in explaining the variation of economic growth, while TO have negative influence on economic growth. LTB found no significant in determining economic growth. Moreover, the sign of LFD, LEC and FDI confirm the expectation of the

hypothesis in the model. The finding shows that higher financial development caused higher level of economic performance. This implies that a percent upsurge in financial progress leads to 10.3 percent rise in GDP.

The positive impact of financial sector improvement on economic performance in the sampled SSA is not surprising as policymakers in these nations put forward of improving financial sector through policies aimed at increased financial access, establishing more number banks, rural banking and credit facilities that enhance production, welfare and investments in recent years. According to Claessens and Feijen (2007) and Kagochi et al. (2013) financial progress in emerging nations is considered as the financial sector development policy that influence economic performance through productive investment and efficient allocation of resources. This outcome is similar with the result reported by earlier studies (Khoutem et al. 2014; Onuonga 2014; Sehrawat & Giri 2015).

Similarly, the result reveals that a percent rise in energy resources results to 3.7 percent increase in GDP of the sampled SSA nations. The result is in line with the study by Alkhatlan and Javid (2013). The outcome shows that FDI caused increase in economic value by 6.2 percent.

The table also illustrates that a percent rise in trade causes 2.0 percent decrease in economic performance. It is surprising that trade openness has negative influence on GDP. We expect more exports and importation into these countries to promote economic growth due their potential effect of improving revenue to the government, production and investment, but instead an, increase in trade openness led to a decrease in economic performance. This result is similar with that reported by Abbas (2014) and Hye and Lau (2015).

Table 4: FMOLS Regression

Variables	Coefficients	t-statistics
LFD	10.37* (0.000)	6.931
LEC	3.737* (0.000)	5.557
LFDI	6.261* (0.004)	3.003
LTO	-2.048* (0.000)	-7.271
LTB	-0.217 (0.421)	-0.807

Note: * indicates 1 percent level of significance. Figures in parenthesis represent respective probabilities

Table 5 illustrates the diagnostic check of the model and it shows that the errors are normally distributed.

Table 5. Diagnostic Checks

Test Type	F-statistics	Probability	Result
Jarque-Bera	3.3854	0.1840	Normally Distributed

V. CONCLUSION

The study investigated the influence of financial progress, energy utilization, FDI, trade openness on economic growth by applying FMOLS technique. The outcomes of the cointegration test indicate a long connection among the variables. Outcome reveals that financial progress, energy use, and FDI positively influence economic performance, while trade openness has negative influence on GDP. However, trade balance does not explain economic performance in SSA.

It is reveals that since financial sector improvement is linked to growth of economic activities in SSA, especially the domestic credit to private sector, the policymakers should consider advance financial reform policies for more effective economic performance and development in the countries. The positive association found between financial progress and economic performance is similar with earlier studies (Sehrawat & Giri 2015). Moreover, the study is limited by fact that the period of the study stopped at 2014. This is for the reason of the availability of data on the variables under consideration. Hence, future studies should consider factors like market capitalization that may influence economic performance.

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