THE NEXUS BETWEEN FINANCIAL DEVELOPMENT AND ECONOMIC GROWTH; GHANAIN EXPERIENCE

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Abstract
This study examined the nexus between financial development and economic growth in Ghana; Economic Growth is proxied with Gross Domestic Product Per Capita was used as the dependent variable while Gross Fixed Capital Formation, Foreign Debt, Foreign Direct Investment and Trade Openness were employed as independent variables. Secondary data analyzed, using descriptive statistics, unit root test, Johansen Co-integration, and ordinary least square methods of multiple regression. It was evident that Gross Fixed Capital Formation (GFCF) and Foreign Direct Investment (FDI) depicts positive and significant influences on Gross Domestic Product Per Capita while Foreign Debt (FD) and Trade Openness (OP) have negative and significant influence on Gross Domestic Product Per Capita. Hence, it is observed that there is a significant relationship between finance and economic development in Ghana. It is recommended that the Ghanaian financial development should be encouraged to support economic growth and development.
Keywords: *Finance, Economic Development, Growth, Nigeria*

Introduction

Ghana has experienced different stages of geographical, political and economic history as a country. This dates back to her colonial history, from about 1901 to WWII). GHANA is the first country in sub-Sahara Africa to get political independence from colonial government. Ghanaian political independence was achieved on the 6th of March 1957. Though, it became self-government with a local Ghanaian Prime Minister was instituted by the British Colonial Government in February 1951. The self-government was established after a period of prolonged agitation by local leaders after the Second World War. Hence, the period from 1951 to 1956 and from 1957 to February 1966 was under the leadership of Dr. Kwame Nkrumah and the Convention People's Party (CPP). CPP swept to power in three national elections organised by the British Colonial Government in 1951, 1954 and 1956 and two subsequent elections after the political independence in 1960 and 1964 (Kwadwo, 1968).

Economically, Ghana was earlier called Gold Coast, because of the rich and large deposits of gold. This was found by European colonialists and explorers from the 15th to 19th Centuries AD. These large gold deposits and other mineral riches of the country led to intense interest and competition by European powers for the coastal trade, which also included extensive trade in slaves. The coastal area of Ghana has

the highest number of forts and castles built by European political authorities and traders in West and Central Africa from the 15th to 19th Centuries AD. It suggests the intense nature of the competition for resources including slaves by European powers in Ghana during the colonial era. It is pertinent to note that the first Europeans to arrive on the shores of present day, Ghana in the 15th Century were the Portuguese. This was followed by the Danes, Dutch, French and finally the British; who assumed colonial power in the 19th Century (Ansah, 1983).

Consequently, between 1951-1966, Ghana experienced major economic transformation and development with the establishment of numerous schools and rapid improvement of transport infrastructure and the setting up of the port city of Tema, about 15 kilometres outside Accra. The development of the Akosombo hydroelectric dam in January 1966 became the cornerstone of the country's industrialisation. The core government economic strategy was based on modest industrialisation through import substitution. Within the period, Ghana became the leader in the drive for political independence in Africa and the beacon of pride in Africa and the Black and African Diaspora.

In the period between 1964 and 1965, Ghanaian economy suffered high inflation and very low world market prices of its main export commodity, cocoa. The above reasons couple with the installation of a one-party state in 1964 and external pressures led to the first military coup in February 1966. The establishment of a one-party state in 1964, based on a nation-wide referendum, was partly the result of significant opposition violence including six major failed attempts to assassinate Dr. Nkrumah from 1958 to 1964 organised by the political opposition and external associates. The highly-intense two-party political rivalry, sometimes characterized by violence, that encompassed the pre-independence period and the 1957 to 1964 period in Ghana, appears to be re-emerging in present day Ghana.

From February 1966 to December 1981, Ghana experienced a period of political instability. A succession of three military coups overthrew two elected civilian governments and one military government. The two elected civilian governments both had exactly 27 months of tenure, from October 1969 to January 1972 and from September 1979 to December 1981, respectively. The military coup on the 31st of December 1981 ended the third experiment with multi-party elected civilian governments. The coup ushered in the Provisional National Defence Council (PNDC) under Flight Lieutenant Jerry Rawlings to oversee the administration of the entire country. The years, 1982 and 1983, were largely politically unstable with many attempted coups. The year, 1984 marked the beginning of a 23-year period of new political stability up to the current year (2006). The military government that came to power at the end of 1981 effectively consolidated power starting in 1984 which also saw the country recover from the major drought of 1983.

In December 2000, the main opposition party, the New Patriotic Party (NPP), an offshoot of the United Party defeated the NDC in both Presidential and Parliamentary elections. This party held power for a short time between October 1969 to January 1972. The Progress Party won elections contested in 1969 that banned parties that followed the traditions of the CPP. The first transition of power from one elected civilian government to another from a different party in Ghana since independence happened in January 2001 as NDC handed over power to the NPP. The re-election of the NPP Government in December 2004 completed a 21-year period of political stability, characterised by moderate economic growth but persistent poverty.

Consequently, between mid-1983 and 1991, the new military government sought assistance from the IMF and the World Bank for a structural adjustment programme, which sought to liberalise the economy and increase investment. The structural adjustment programme was modestly successful with increase in growth rates due to increases in total investment even though it led to increased poverty especially among the lower and middle classes. In the political arena, a constitutional government was installed in January 1993, after elections in December 1992. Flight Lieutenant Rawlings, who had then retired from the military, to contest the elections as a civilian, was elected President. His party, the National Democratic Congress (NDC) controlled Parliament. Mr. Rawlings was re-elected for a second final four-year term in December 1996.

Due to power rationing and energy shortages resulting from the low water level of the Akosombo Dam, which supplies 60% of the energy requirements of the country, since September 2006, it is likely that economic growth will be significantly affected in the short-term period. The then government aims to raise annual economic growth rate to 8% and higher in the medium-term period based on its new strategy called the Growth and Poverty Reduction Strategy, 2006-2009. It also targets the lifting of Ghana to a middle-income country by 2015 based on the achievement of a per capita income of US$1 ,000 from the low level of US$380 per capita in 2005. An increase of per capita income by 163% is expected to be achieved in just nine years.

Between 2017 and 2020, in 2018, it grew by 6.20% in 2018 from 2017, in 2019, it growth by 6.51% 2018 and in 2020, it declines to 5.59% from 2019. Hence, in recent times, Ghanaian growth is pegged at 6%. Hence, this research on the relationship between financial development and economic growth; Ghanaian experience is undertaken to clearly ascertain the relationship between financial development and economic growth in Ghana.

Objectives of the Study

The aim of this study is to establish the relationship between financial development and economic growth; Ghanaian experience. The specific objectives include:

1. To determine the impact of Gross Fixed Capital Formation on Gross Domestic Product Per Capita in Ghana.
2. To determine the impact of Foreign Direct Investment on Gross Domestic Product Per Capita in Ghana,
3. To determine the impact of Foreign Debt on Gross Domestic Product Per Capita in Ghana
4. To determine the impact of Trade Openness on Gross Domestic Product Per Capita in Ghana.

The Research paper consist of five (5) sections. Section one (1) is the Introduction. Section two (2) is the literature review, Section three (3) is the methodology, Section four (4) is data presentation and analysis and Section five (5) is conclusion/ recommendations.

Literature Review

Conceptual Framework

Finance is defined as the management of money, financial resources. It includes financial activities such as investing, borrowing, lending, budgeting, saving, and forecasting. Economic Development: is defined as the process by which the economic well-being and quality of life of a nation is improved or transformed according to desired targeted goals and objectives. Economic Growth is defined as an increase in the capacity of an economy to produce goods and services, compared from one period to another. Economic growth is a process by which a nation's wealth increases over time. The most widely used measures of economic growth are the rate of growth in a country's total output of goods and services gauged by the gross domestic product (GDP). Economic growth can also be referred to as the increase of per capita gross domestic product (GDP) or other measures of aggregate income, typically reported as the annual rate of change in the real GDP. Economic growth is primarily driven by improvement in productivity, which involves producing more goods and services with the same inputs of labour, capital, energy and materials (Nzotta, 2005). The capital market seems to influence economic growth through its funds mobilization that would result in savings. Savings, on the other hand result in capital accumulations, which have direct bearing on economic growth and development.

Theoretical Framework

The relationship between finance markets and institutions and economic growth has been widely researched. Theorists have different views namely supply-led growth and demand-following growth**.** According to the supply-led growth theory**,** it is financial development that promotes economic growth while according to the demand-following growth theory**,** it is economic growth that engender the

development of financial markets and institutions. Though, some theorists believe that the finance-growth nexus depends on the economy's level of development. Therefore, we will likely expect supply-led growth in low-income economies and demand-following growth in high-income economies. Hence, the expansion of financial markets drives real economic growth at early states of economic development while economic growth drives the expansion of financial markets in mature economies. Thus, as a financial service, has a catalystic role in the economic growth and development of low-income economies. Of course, Ghana is grouped as a low income economy.

This research is based on the Financial market theory of development. Financial market theory of development is an economic theory to use private flows of capital in new stock markets to stimulate domestic economic development in developing countries. The theory was put forward by the World Bank's World Development Report for 2000. Though, the theory has its criticisms, according to Ajit Singh, Professor Emeritus of economics at Cambridge University, noted that stock market development is not an essential progression for the development of a country's financial development. He points out the post-World War II period countries of Germany, Italy, Japan, Korea and Taiwan which were able to industrialize and achieve "economic miracles with little assistance from the stock market.

Empirical Framework

The argument on the nexus between finance and economic growth dates back to Bagehot (1873) who argue that efficient financial institutions speed capital reallocation to sectors that are anticipated to grow faster and thus face better investment prospects, or growth opportunities. Schumpeter (1911), who popularized the significant role of financial sector development in economic growth via the provision of efficient financial services, argues that a well-developed financial system spurs growth in technological innovations by redistributing resources from less productive to the more productive sectors Fisman and Love (2004) noted that industry value added growth patterns are more closely correlated for country pairs with similar levels of Financial development. On the contrary, Lewis (1956) submitted that financial markets first develop, as a consequence of the economic growth process, before driving real economic activity. The financial sector is no doubt the engine room of any economy as it makes resources available for investment, and consequently leading to economic growth.

Methodology

This study employed the expos facto research design. Empirical analysis was carried out using historical data for relevant period of time. Secondary data was employed for analysis.

Model specification

The study focuses on the four most commonly encountered determinants of development in literature: (i) gross fixed capital formation (GFCF), (ii) import and export: (net or as a ratio), (iii) foreign direct investment and (iv) external borrowing and others. one moderator variable, the exchange rates, are also included as determinants of economic development. GDP *per capita* is our as dependent variable. While GFCF, FDI, FD and OP are our independent variables. We therefore have our economic growth model as follow:

GDPPC = f (GFCF, FDI, FD, OP) ……. (1)
$GDPPC = b_o + b_1GFCF + b_2\ FDI + b_3\ FD + b_4\ OP + U$…… (2)
Where:
GDPPC= Gross Domestic Product Per Capita, GFCF= Gross Fixed Capital Formation
FDI= Foreign Direct Investment, OP= Trade Openness, b_o= Constant, b_1 - b_2= Coefficients or parameters of the Economic Growth Models.
Transforming equation 2 above with the natural logarithm,
$GDPPC = b_o + b_1GFCF + b_2\ FDI + b_3\ FD + b_4\ OP + U$…… (2)
$LNGDPPC = b_o + b_1LNGFCF + b_2\ LNFDI + b_3\ LNFD + b_4\ LNOP + U$…… (3)
Which our economic growth model for estimation.

Result

Table 1: Descriptive Statistics Results for Ghana's Finance and Economic Growth Nexus (1981-2019)

	LNGDPPC	**LNGFCF**	**LNFDI**	**LNFD**	**LNOP**
Mean	11.79650	9.272378	8.370550	3.720062	3.741261
Median	11.61252	9.198657	8.146128	3.707485	3.841109
Maximum	12.38077	10.20602	9.542825	4.144387	4.064645
Minimum	11.41241	8.041393	7.000000	3.219585	2.800717
Std. Dev.	0.323073	0.592785	0.864150	0.254768	0.286044
Skewness	0.691956	-0.121728	0.164009	-0.197185	-1.743757
Kurtosis	1.797376	2.444265	1.656515	2.086863	5.651495
Jarque-Bera	5.462468	0.598184	3.107893	1.607690	31.18891
Probability	0.065139	0.741491	0.211412	0.447605	0.000000
Sum	460.0634	361.6228	326.4515	145.0824	145.9092
Sum Sq. Dev.	3.966286	13.35297	28.37673	2.466457	3.109195
Observations	39	39	39	39	39

Source: E-View 9 Output

Table 1 presents the descriptive statistics results for Ghana's macroeconomic research data for the period between 1981 and 2019. It is deducible from the Table 1 that the research variables have recorded low variation within the research period. LNFDI depicts the highest variation, followed by LNGFCF, LNGDPPC, LNOP and LNFD. This supported by the low range between the max. and min. values of all the variables. Also, while LNGDPPC and LNFDI depicts positive skewness, LNGFCF,

LNFD and LNOP indicate negative skewness. Further, except, LNOP that is leptokurtic, all the variables are platykurtic, which means absence of major fluctuations. Expectedly, except LNOP, all the variables are normally distributed; given the lower than 5% Jarque-Bera p-values.

Table 2: Unit-Root Result for finance-growth nexus in Ghana

Variable		**at level**	**at first difference**	**at second difference**	**Equation Specification**	**Order of integration**
LnGDPPC	ADF	-1.754221 (0.3968)	-5.229343 (0.0001)	-	Intercept	I(1)
	PP	-1.737115 (0.4051)	-5.229343 (0.0001)	-	Intercept	I(1)
LnGFCF	ADF	0.423497 (0.9814)	-6.233063 (0.0000)	-	Intercept	I(1)
	PP	0.455743 (0.9828)	-6229711 (0.0000)	-	Intercept	I(1)
LnFDI	ADF	-0.806772 (0.8058)	-5.276115 (0.0001)	-	Intercept	I(1)
	PP	-0.811931 (0.8043)	-5.185320 (0.0001)	-	Intercept	I(1)
LnFD	ADF	-1.375281 (0.5841)	-5.117454 (0.0002)	-	Intercept	I(1)
	PP	-1.619818 (0.4629)	-5.106464 (0.0002)	-	Intercept	I(1)
LnOP	ADF	0.755051 (0.9918)	-4.754481 (0.0005)	-	Intercept	I(1)
	PP	0.715398 (0.9910)	-4.677102 (0.0006)	-	Intercept	I(1)

Source: E-View 9 Output

Table 2 depicts the unit-root result for variables stationarity. The ADF and PP were applied to ascertain stationarity or non-stationarity presence. It is evident that all the variables are integrated in the same order, that is, I (1). This implies the absence of non-stationarity. Hence, suggesting the plausibility of strong cointegrating relationships among the variables. Consequently, the uniform integration order affirms the use of Johansen co-integration technique. (See Table for the co-integration results).

Table 3: Johansen Co-Integration Result

Date: 05/18/23 Time: 16:20		
Sample (adjusted): 1983 2019		
Included observations: 37 after adjustments		
Trend assumption: Linear deterministic trend		

Series: LNGDPPC LNGFCF LNFDI LNFD LNOP				
Lags interval (in first differences): 1 to 1				
Unrestricted Cointegration Rank Test (Trace)				
Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.529634	71.81283	69.81889	0.0344
At most 1	0.464967	43.90579	47.85613	0.1120
At most 2	0.324285	20.76502	29.79707	0.3725
At most 3	0.138196	6.261606	15.49471	0.6646
At most 4	0.020296	0.758691	3.841466	0.3837
Trace test indicates 1 cointegrating eqn(s) at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				
**MacKinnon-Haug-Michelis (1999) p-values				

Source: E-View 9 Output

Table 3 presents the co-integration results among the integrated variables. As indicated by the co-integration results, there is 1 cointegrating eqn(s) at the 5% level. Thus, there possibility of long-term convergence among the integrated variables. Contextually, long-run relationship exists between finance and growth in Ghana. However, since the existence of cointegration vectors among the integrated variables does not imply the existence of causal influence or relationship between a model's pairs of variables, conducting short-run and long-run estimations are imperative.

Table 4: Short-Run Estimations
Dependent Variable: LNGDPPC
Method: Least Squares
Date: 05/18/23 Time: 16:48
Sample (adjusted): 1982 2019
Included observations: 38 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNGFCF	0.403242	0.050341	8.010264	0.0000
LNFDI	0.112814	0.037690	2.993237	0.0053
LNFD	-0.259674	0.065412	-3.969834	0.0004
LNOP	-0.419199	0.065828	-6.368050	0.0000
U(-1)	-0.479510	0.149835	-3.200257	0.0031
C	9.644663	0.287099	33.59350	0.0000

R-squared	0.974919	Mean dependent var	11.78112
Adjusted R-squared	0.971000	S.D. dependent var	0.312615
S.E. of regression	0.053236	Akaike info criterion	-2.884219
Sum squared resid	0.090691	Schwarz criterion	-2.625652
Log likelihood	60.80015	Hannan-Quinn criter.	-2.792223
F-statistic	248.7741	Durbin-Watson stat	1.742248
Prob(F-statistic)	0.000000		

Source: E-View 9 Output

Table 4 presents the short-run estimations for finance-growth nexus in Ghana. Evidently, LNGFCF and LNFDI depicts positive coefficients values of 0.4032 and 0.1128 respectively, while LNFD and LNOP have negative coefficients values of -0.2596 and -0.4191. These imply that while LNGFCF and LNFDI positively influence LNGDPPC, the LNFD and LNOP negatively influence the LNGDPPC. All the variables are statistically significant, including the ECM (U), but with negative effects, which conforms with apriori. The R-squared and Adjusted R-squared values of 0.9749 (97.49%) and 0.9710 (97.10%) suggests that finance influence economic growth in Ghana to the tune of 97.49% and 97.10%. The prob(F-statistic) confirm the overall model significance. The Durbin-Watson stat value of 1.74 imply the absence of autocorrelation.

Table 5: Long-Run Estimation
Dependent Variable: LNGDPPC
Method: Least Squares
Date: 05/18/23 Time: 16:38
Sample: 1981 2019
Included observations: 39

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNGFCF	0.410572	0.058247	7.048835	0.0000
LNFDI	0.133627	0.043737	3.055250	0.0044
LNFD	-0.221403	0.075771	-2.921991	0.0061
LNOP	-0.475623	0.074945	-6.346271	0.0000
C	9.474049	0.328165	28.86976	0.0000

R-squared	0.966491	Mean dependent var	11.79650
Adjusted R-squared	0.962549	S.D. dependent var	0.323073
S.E. of regression	0.062522	Akaike info criterion	-2.587392
Sum squared resid	0.132905	Schwarz criterion	-2.374115
Log likelihood	55.45414	Hannan-Quinn criter.	-2.510870
F-statistic	245.1648	Durbin-Watson stat	1.012376
Prob(F-statistic)	0.000000		

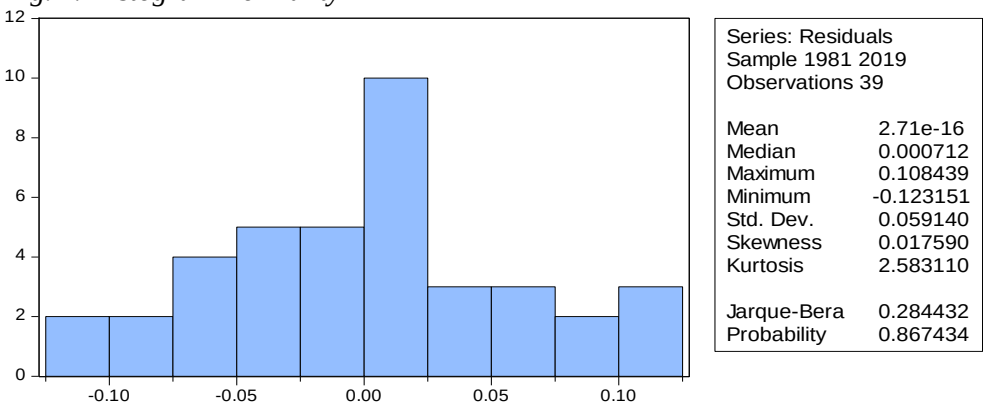
Source: E-View 9 Output

Table 5 presents the short-run estimations for finance-growth nexus in Ghana. The results are similar to the short-run estimations, except for the Durbin-Watson stat of 1.01, which suggests the possibility of first-order autocorrelation. Thus, due to the possibility of autocorrelation, some regression (residual and stability) diagnostics checks are performed.

Regression Diagnostics

Residual Diagnostics

Fig. 1. Histogram Normality



Source: E-View 9 Output

The Fig. 1 result reaffirms the variables' normality, given the less than 5% Jarque-Bera prob value.

Table 6: Serial Correlation and Heteroskedasticity Tests

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	0.515176	Prob. F(2,30)	0.6026

Obs*R-squared	1.261777	Prob. Chi-Square(2)	0.5321

Heteroskedasticity Test: Breusch-Pagan-Godfrey

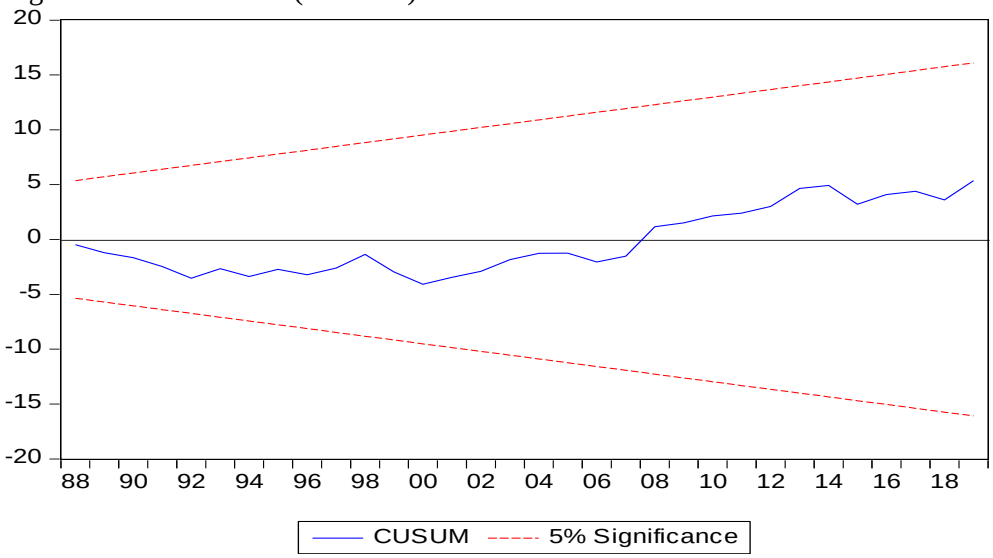
F-statistic	1.630983	Prob. F(4,34)	0.1890
Obs*R-squared	6.278593	Prob. Chi-Square(4)	0.1793
Scaled explained SS	3.777218	Prob. Chi-Square(4)	0.4370

Source: E-View 9 Output

The Table 6 presents the results for both serial correlation and heteroskedasticity tests. Observably, given the higher than 5% p-values for both tests F-statistic and Obs*R-squared, the study affirms the absence of autocorrelation and heteroskedasticity.

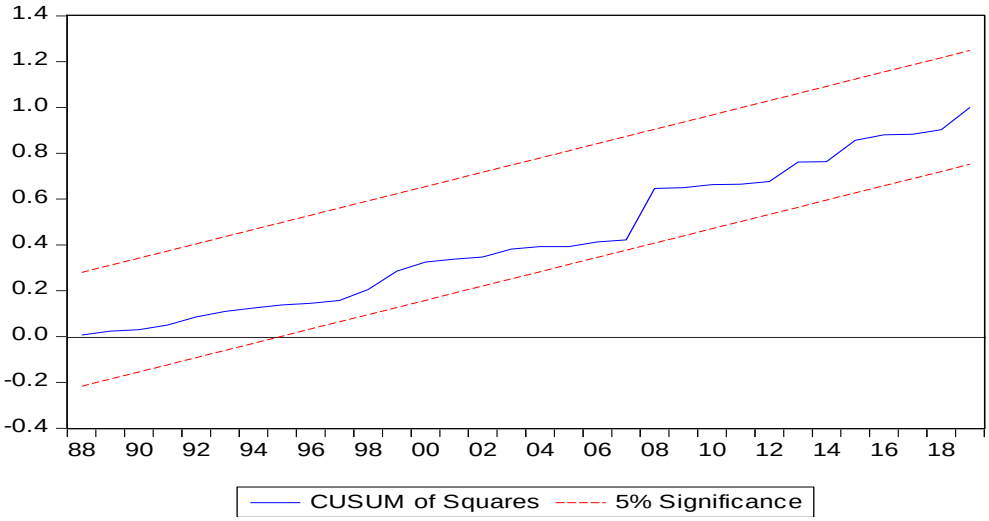
Stability Diagnostics (Recursive Estimates)

Fig. 2: Cumulative Sum (CUSUM)



Source: E-View 9 Output

Fig. 3: Cumulative Sum of Squares (CUSUM SQ)



Source: E-View 9 Output

The Fig. 2 and Fig. 3 ascertains the model stability, hence, the reliability of findings. Thus, given the blue line within the two red lines upper and lower bounds, it can therefore be said that the research model passes stability test.

Conclusion/Recommendations

Judging from our empirical analysis of the financial development and economic growth nexus in Ghana, it was evident that Gross Fixed Capital Formation (GFCF) and Foreign Direct Investment (FDI) depicts positive and significant influences on Economic Growth represented by Gross Domestic Product Per Capita while Foreign Debt (FD) and Trade Openness (OP) have negative and significant influence on Gross Domestic Product Per Capita. Hence, we can sufficiently note that there is a significant relationship between finance and economic development in Ghana; Post cold war.

It is recommended that the Ghanaian government should build more capacities to diversify their economy and open up her economy for economic transaction, with a view to stimulate her exports with the rest of the world. And engender economic growth and development.

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