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FINANCIAL GLOBALISATION AND ECONOMIC TRANSFORMATION IN AFRICA: EVIDENCE FROM NIGERIA

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Abstract: This study examines the effects of financial globalisation on the Nigerian economy using data from the Central Bank of Nigeria statistical bulletin and the Nigeria Bureau of Statistics reports from 1992 to 2017. Using both descriptive and inferential statistical analyses, the study reveals that financial globalisation has helped to mobilise foreign direct investment into the economy and the significant positive effect of personal remittances on per capita income of Nigerians. Therefore it recommends that favourable policies to attract and retain FDI and personal remittances from developed nations should be encouraged and African governments and economic actors should consider all stakeholders' interests, and ensure that an international financial and trade system is "fair and reciprocal" to eliminate the persisting trends in abject poverty, predatory trade policies and the escalation of economic inequalities in Africa.

Keywords: financial globalisation, Foreign Direct Investment, *per capita* income, market capitalisation, personal remittance.

1. Introduction

The world is now a global village where countries engage in international trade at the speed of light, payments through the international financial organisation and the technology-driven market have changed the narrative of globalisation and its influence on African economies. The global interchange and incursion of countries

like China, France USA and other developed economies into African economies have altered the variables, thereby transforming the structure of economic activities in Africa in general and Nigeria in particular, although there was justification for countries to open their boarders and remove restrictions on the trade and payment system believing that it will lead to the more efficient allocation of resources and an increase in the welfare of the people and developing countries.

In theory, financial globalisation and the unrestricted flow of funds worldwide is expected to galvanise massive economic returns to nations that are investing and the nations where the investment is domiciled. Global trend productivity and employment are believed to grow faster, thereby lifting less developed countries out of poverty and helping to maintain (or further improve) living standards in the developed world. Low-income households are expected to benefit in particular, with the result that both global and within-country inequality is decreased. According to a World Bank report, exporters of funds and importers can benefit from financial globalisation in the following three ways:

I. It can provide low-income countries with access to capital and help to improve the allocation of funds. It should also make it easier for low-income households to access the capital market and thereby lower income inequality within countries.

II. By imposing discipline on governments, it can improve macroeconomic policy-making and encourage the implementation of pro-growth reforms. This would improve income prospects across the board but would be particularly beneficial for low-income households ("pro-poor growth").

III. By strengthening corporate governance (for instance through a more competitive market for corporate control), the argument goes is that financial globalization helps to put capital flows to the most efficient and productive use and ensure that executives are performing at their best. This improves the business environment in both emerging and developed countries [World Bank Report 2008, pp. 40-41].

With over three decades of engagement in financial globalization by African countries and particularly Nigeria, the recent financial crisis and global meltdown and the attendant consequences such as highly skill labour migration of Africans to the 'global north', capital flight, high interest rate and inflation rate, low productivity by African companies, and weak regulatory institutions have impacted negatively on economic growth. The relationship between financial globalisation and economic development, transformation and growth in emerging countries and advanced countries have been studied extensively (see [Asongu, De Moor 2017; Antwi, Koranteng 2017; Asongu 2014]).

However, there is a mixed and inconclusive beneficial effect of financial globalisation on economic transformation and growth in some countries. Despite the increasing and inherent benefit of financial globalisation especially in recent years, the financial globalisation-economic transformation and growth nexus in Nigeria has not yet been intensively investigated. To the best of our knowledge, only a handful of studies to date such as [Nzotta et al. 2012; Nurudeen 2009; Okodua 2009] have attempted to study the issue and have provided mixed conclusions.

The questions are, have African countries benefited from financial globalisation? Is the intended benefit inherent in globalisation for lower income countries or for the advanced/ high income countries? Is Nigeria better off and by extension Africa well off or worse off after embracing financial globalisation? Is *per capita*l income higher before financial globalization? Is Africa the prime destination for foreign direct investment?

To have a deeper understanding of the phenomena, the broad objectives of this study is to examine the impact of financial globalization on the economic transformation in Africa with evidence from the Nigerian economy. The specific objectives are as follows:

1. Determine the effect of personal remittance on *per capita* income in Nigeria.

2. Determine the relationship between foreign direct investment and market capitalisation in Nigeria.

3. Ascertain the impact of the foreign exchange rate on market capitalisation in Nigeria.

4. Examine the effect of foreign direct investment on *per capita* income in Nigeria.

The scope of this study covers ten specific years between 1992 and 2017, during this period Nigeria experienced growth in key economic sectors, in spite of the recent global financial crisis that affected the economy. The rest of the paper is structured into four sections. Empirical review, theoretical nexus and conceptual framework are discussed in Section II, followed by the methodology in Section III. Analysis and discussion of the findings is the focus of Section IV, while the paper ends in Section V with a conclusion and recommendations.

2. Review of literature and theoretical framework

Financial globalisation as a tool of development and a concept was tested by the recent global financial crisis. Financial globalisation is hinged on risk sharing and consumption smoothing. This has been studied and empirical evidence provided in the literature. However, evidence from extant literature shows contradicting results. Broner and Ventura's [2010] study revealed that financial globalization could produce different results (I) higher investment and growth through the capital inflow; (II) capital flight, low investments and growth at domestic level; (III) unstable financial market and volatile capital flow at domestic level. All of which depends on several factors, such as quality of institutions, efficient regulators, productivity and domestic savings.

Auerbach and Siddiki [2004, p. 231] also suggest that financial globalisation is the remover of any impediments in the financial segment of less developed countries so as to bring it in line with that of the advanced nations. Such implementation of financial globalisation by developing nations will drastically aid production and the capital flow required for transformation. Proponents of financial globalisation argue

that financial limitation is the cause for lower growth rates in Nigeria and other developing nations that otherwise would be higher if the open market would decide the flow of capital to projects. Several studies agree that financial liberation does lead to economic transformation such as Egbetunde and Akinlo [2015] Giuliano and Ruiz-Arranz [2009] Rey [2015]. For example Bekaert, Harvey and Lundblad [2011] observe that financial liberalisation leads to emerging market integration with the global equity markets, therefore assets in emerging market and the developed markets exhibit similar expected returns.

Other scholars differ in their submission on financial liberalisation and economic transformation. Nyawata and Bird [2004] investigated the financial liberations in Southern African countries, the findings show that financial liberalisation is no panacea and will not improve economic performance unless accompanied by sound economic policies and regulatory policies. Furthermore, Eichengreen and Leblang [2003] studied the effect of financial liberation on economic growth utilising a data set for 21 countries ranging from 1887 to 1997, the findings revealed that there is weak evidence that financial liberalisation leads to growth. This theory is found relevant to this study because it offers a solid theoretical foundation for the specific objectives of this study.
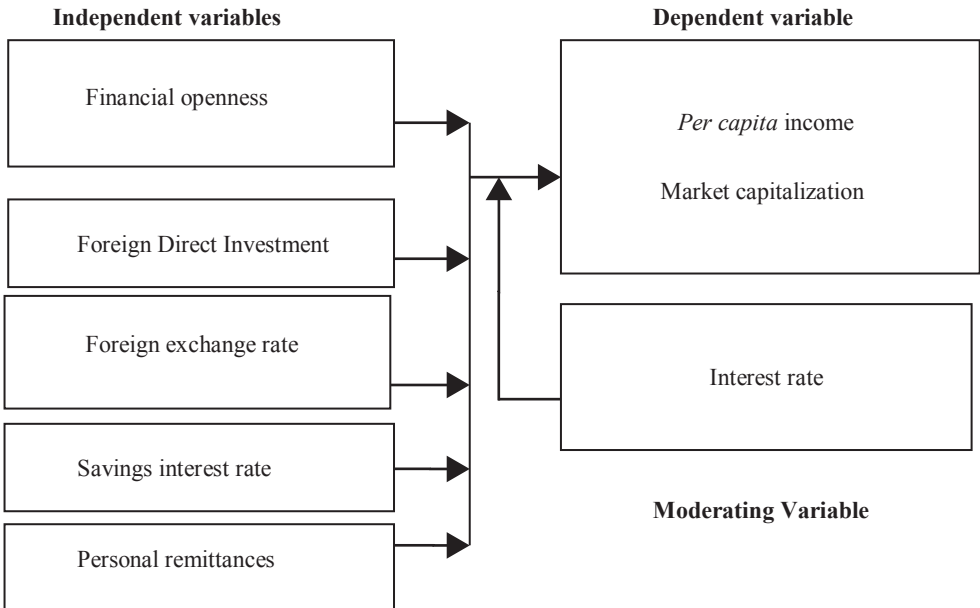

Fig. 1. Conceptual framework

Source: own work.

This study anchors on the theory of financial liberation. The financial liberation theory was propounded by McKinnon and Shaw [1973, p. 9], it asserts that financial liberalisation is a necessary ingredient in the generation of high saving rates and investment and that the subsequent real growth in the financial institutions provides domestic investors with the incentive to borrow and save, thus enabling them to accumulate more equity thereby lowering the cost of borrowing. The conceptual framework is summarized in Figure 1.

3. Methodology and model specification

This section deals with the method of data gathering and analysis, As well as the measurement used for the varied variables. The data used for this study was collected from the Central Bank of Nigeria bulletin data from 1992 to 2017. Any missing data were extracted from the Nigeria Bureau of statistics and the World Bank. The data were compared for consistency and correctness to ensure that the data were free from errors.

The independent variables for this study are measured as follows:

Financial openness – the study measures financial openness in accordance with the dataset constructed and suggested by Lane and Milesi-Ferretti [2001] and employed by O'Donnell [2001] and Prasad, Rogoff, We and Kose [2005]. Operationally, these measures involve adding the gross levels of FDI plus portfolio assets and deducting the liabilities through the accumulation of the related inflows and outflows and making needed valuation adjustments as a share of GDP. This study adopts these data stock because they constitute a better indication of financial openness; they are less volatile from year to year and are less prone to measurement error.

Foreign Direct Investment: this study measures FDI as the total inflow from outside the country for investment against the outflow for investment to enterprises resident in a reporting economy as a percentage of GDP, as suggested by the Organisation for Economic Co-operation and Development [2004] OECD and employed by Wang, Hong, Kafouros and Wright [2012], Buckley, Clegg and Wang [2010].

Personal remittances: prior studies that employed remittance variables are Giuliano and Ruiz-Arranz [2009], Burgess and Haksar [2005], and Antwi and Koranteng [2017]. Operationally, this study measures personal remittances as the total inflow from foreign workers to their home countries.

Foreign Exchange rate: this study measures the foreign exchange rate as the average Central Bank of Nigeria exchange rate for the US dollar against the Naira prevailing throughout the year. Extant studies that employed foreign exchange rates include Fernández, Klein, Rebucci, Schindler and Uribe [2015], and Stern [2017]. Moreover, the interest rate on savings which is the average percentage rate per month for twelve months divided by 12 to derive the average for the year was also used as

one of the independent variables. Others studies that employed savings interest rate are King and Low [2014], Du, Tepper and Verdelhan [2018] and Keynes [2016].

The dependent variable for this study are: the *per capita* income; previous studies that employed per capita income variable include Cherodian and Thirlwall [2015], Ugur [2014] Solt [2016]. Operationally, this study measures *per capita* income as a percentage of Gross Domestic Product divided by the population of Nigeria. The Nigeria Stock Exchange market capitalisation is the second dependent variable, which is the average of the yearly closing value of all listed stocks on the capital market. Other studies that have equally employed this measure of market capitalisation include Adaoglu [2000], Kiviaho, Nikkinen, Piljak and Rothovius [2014], Noakes and Rajaratnam [2016].

The study incorporates one additional variable to control for confounding variables likely to influence the results of this study. A control variable employed in similar studies is the inflation rate. This includes Asongu [2014], Egbetunde and Akinlo [2015], as well as Bianchi and Civelli [2015]. Operationally, the inflation rate as a measure involves the weighted average of prices of a basket of consumer goods and services. It is derived by ascertaining price changes for every item in the predetermined basket of goods and services and thereafter averaging them yearly. However, the general interest rate was employed for this study since it has the ability to predict or determine business activities in the economy. These variables as indicated previously, were selected in relation to previous studies and the specific interest on variables that could capture the financial globalization and economic transformation based on data availability in Nigeria.

To examine the effect of financial globalisation on economic transformation in Nigeria, the regression model is specified in equations (1) and (2):

$$PCI = \beta_0 + \beta_1 FO_t + \beta_2 FDI_t + \beta_3 FER_t + \beta_4 INR_t + \beta_5 PR_t + \beta_6 SIR_t + \varepsilon_t \qquad (1)$$

$$MAC = \beta_0 + \beta_1 FO_t + \beta_2 FDI_t + \beta_3 FER_t + \beta_4 INR_t + \beta_5 PR_t + \beta_6 SIR_t + \varepsilon_t \qquad (2)$$

where: β_0 – regression output constant; $\beta_1 - \beta_6$ – the coefficient of the independent variables; PCI_t – *per capita* income in time t; MAC_t – market capitalisation in time t; FO_t – financial openness in time t; FDI_t – foreign direct investment in time t; FER_t – exchange rate in time t; INR_t – interest rate in time t; PR_t – personal remittance in time t; INF_t – inflation rate in time t; SIR_t – savings interest rate in time t; ε_t – is the error term assumed to be normally distributed with zero mean and constant variance.

4. Analysis and discussion of findings

The data collected were analysed, presented and discussed with respect to the models specified in Section 3.

Effect of financial globalisation on *per capita* income

Table 1. Descriptive statistics on effect of financial globalisation on *per capita* income

	PCI	FO	FDI	FER	SIR	PR	INR
Mean	17.072	0.513	0.587	126.97	3.685	21 991.380	9.947
Median	9.741	0.341	0.337	124.29	3.715	3 764.635	10.212
Maximum	37.018	1.944	3.374	305.79	5.725	209 558.200	17.143
Minimum	0.563	0.032	0.013	20.581	1.410	44.710	1.055
Std. dev.	15.303	0.550	0.704	60.652	1.114	54 676.440	4.326
Skewness	0.246	1.151	2.839	1.0190	−0.163	2.822	−0.236
Kurtosis	1.196	3.649	10.904	4.727	2.521	9.434	2.205
Jarque-Bera	3.789	6.196	102.587	7.7312	0.365	79.348	0.9258
Probability	0.150	0.045	0.000	0.0210	0.833	0.000	0.6295
Sum	443.869	13.351	15.256	3 301.227	95.82083	571 775.900	258.6317
Sum sq. dev.	5854.316	7.572	12.397	91 967.550	31.02650	7.47E+10	467.7876

PCI – *per capita* income, FO – financial openness, FDI – foreign direct investment, FER – foreign exchange rate, SIR – saving interest rate, PR – personal remittance, INR – inflation rate.

Source: own work.

Table 1 shows the descriptive statistics of the variables considered in model 1. The mean score ranges from 0.513 to 126.97. FO has a mean of 0.513 and FDI recorded a mean of 0.587. The variable with the highest mean of 126.97 is FER. Model 1 shows that the dependent variable (PCI) has a mean and median value of 17.07 and 9.74 respectively, while SIR and FO have the minimum mean and median values of 3.685 and 0.341 respectively.

The standard deviation measures the variability of the data from the mean. As indicated in Table 1, the root mean square deviation, otherwise referred to as the standard deviation, shows how dispersed the data are from each other. The standard deviation of the variables is minimum, indicating low variability except for PR with 5467.44. The minimum and maximum values are another measure of dispersion, (the range) which indicates the difference between the highest and the lowest value of the time series.

Table 2 summarizes the unit root test for time series stationarity. The augmented Dickey Fuller test of stationarity was employed. The stationarity test helps to avoid the pitfall of spurious regression results. The result shows that the dependant variable was stationary at levels I (0). The independent variables were, however, stationary after the first difference I (1), except the FDI which was stationary at levels I (0). It follows therefore that all the variables are stationary both at levels and after the first difference.

Having confirmed the stationarity of the variables, the test for a long-term relationship in the selected variables was conducted. The Johansen test statistics was employed to detect any long-term relationship among the variables. The test shows

Table 2. Results of unit root test

Variable	Level	Prob.*	First difference	Decision
FDI	−5.153340 (0)	0.0004** (0)		I(0)
FER		0.0000** (0)	−6.739416 (0)	I(1)
FO		0.0070** (0)	−3.930144 (0)	I(1)
INR		0.0181** (0)	−3.461777 (0)	I(1)
PCI	−4.106030 (0)	0.0043** (0)		I(0)
PR		0.0641* (0)	−2.878494 (0)	I(1)
SIR		0.0272** (0)	−3.284748 (0)	I(1)

* and ** indicate rejection of the null hypothesis at the 5% levels and accepting the alternate hypothesis, respectively. The 5% critical value for the augmented Dickey-Fuller test (ADF). Numbers inside parentheses are lag lengths, which are selected by the Schwarz Information Criterion (SIC).

Source: own work.

Table 3. Cointegration test

Unrestricted cointegration rank test (Trace)				
Hypothesized no. of CE(s)	Eigenvalue	Trace statistic	0.05 critical value	Prob.**
None *	0.998634	308.2051	125.6154	0.0000
At most 1 *	0.935679	149.9026	95.75366	0.0000
At most 2 *	0.784072	84.04983	69.81889	0.0024
At most 3	0.626999	47.26235	47.85613	0.0568
At most 4	0.472356	23.59417	29.79707	0.2181
At most 5	0.289199	8.250155	15.49471	0.4390
At most 6	0.002391	0.057460	3.841466	0.8105

Trace test indicates three 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: own work.

the number of cointegrating vectors in the equation. The null hypothesis for the Trace test statistics is that there is no long-term association among the variables, against the alternative hypothesis that there are cointegrating vectors. The trace statistics and maximal eigenvalue output as shown in Table 3 which reveal and corroborate that the variables have a long-term association.

The unrestricted cointegration rank test trace statistics hypothesized the number of co-integrations. This indicates three co-integrated equations at the 5% level of

significance. Trace statistics were greater than the 0.05 critical values as expected, except for the remaining equations. The probabilities of the three co-integrated equations were found to be highly significant. This implies that the variables are co-integrated and there is a long-term relationship among variables.

The least square regression approach was employed. A level form analysis of the regression estimates results in Table 4 shows that financial openness, foreign exchange rate, and savings/interest have a negative sign. These indicate that there is an inverse relationship between the *per capita* GDP and the variables. Thus the foreign exchange rate and savings/interest have not contributed largely to economic transformation in the years under review. Similarly, financial openness has not significantly contributed to the wellbeing of the individual citizen. A unit increase in SIR reduces PCI by 5.23%. A unit increase in the foreign exchange rate led to a 0.08% fall in the GDP *per capita*. However, FDI and personal remittances show a positive relationship with the *per capita* GDP. This implies that as both variables increase, the *per capita* GDP equally increases. A unit increase in both FDI and PR results in a 3.67 and 2.45 increase in the *per capita* GDP. Therefore, this implies that FDI and PR have a significant effect on *per capita* income thereby aiding economic transformation.

The R-square of 89% and corresponding adjusted R-square of 87% implies that the independent variables explained more than 87 per cent of the variation in the dependent variable. The F-statistics test for the overall significance of the model with a value of 28.03 and the corresponding probability with 0.000 signifies that the model has the goodness of fit or the independent variables jointly and significantly determines *per capita* income.

Table 4. Least square estimates results

Variable	Coefficient	Std. error	t-Statistic	Prob.
C	34.905280	6.491566	5.377021	0.0000**
FO	−15.607430	5.514523	−2.830242	0.0107**
FDI	3.670606	3.312693	1.108043	0.2817
FER	0.087898	0.036774	2.390215	0.0274**
SIR	−5.235153	1.408786	−3.716074	0.0015**
PR	2.450000	2.93E−05	0.838160	0.4124
INR	−0.440247	0.322725	−1.364154	0.1885
R-squared	0.898505	Mean dependent var		17.07187
Adjusted R-squared	0.866454	S.D. dependent var		15.30270
F-statistic	28.033690	Durbin-Watson stat		1.410693
Prob(F-statistic)	0.000000			

Source: own work.

The Breusch-Godfrey Serial Correlation LM Test (Table 5) shows a probability Chi-statistics of 0.3261. The null hypothesis is hereby rejected because the probability

statistics is insignificant, and the conclusion implies that there is no serial correlation. Moreover, the Breusch-Pagan-Godfrey heteroskedasticity test indicates the absence of heteroskedaticity. The probability Chi-square of 0.3771 is insignificant at 5%. This means that the residual is homoskedastic, implying that the model specified and estimated does not suffer from the problem of heteroskedasticity. The CUSUM test (Figure 2) shows that the model is stable over time with the exception of a few years when there are variations.

Diagnostic test

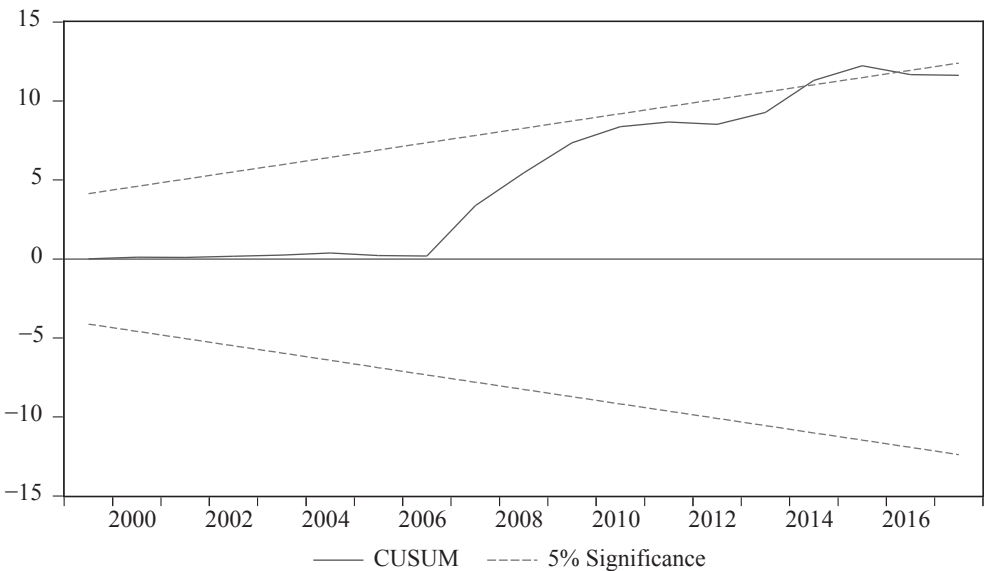**Table 5.** Breusch-Godfrey serial correlation LM test

F-statistic	1.197667	Prob. F(2,17)	0.3261
Obs*R-squared	3.211013	Prob. Chi-Square(2)	0.2008

Source: own work.

Table 6. Heteroskedasticity test: Breusch-Pagan-Godfrey

F-statistic	1.039763	Prob. F(6,19)	0.4309
Obs*R-squared	6.426791	Prob. Chi-Square(6)	0.3771
Scaled explained SS	2.693585	Prob. Chi-Square(6)	0.8462

Source: own work.

Fig. 2. CUSUM test

Source: own work.

Effect of financial globalisation on market capitalisation

Table 1A (see Appendix) shows the descriptive statistics of the variables considered in model 2. The mean score ranges from 0.513 to 21991.38. FO has a mean of 0.513 and SIR recorded a mean of 3.685. The variable with the highest mean of 21991.38 is PR. Model 2 shows that the dependent variable (MAC) has a mean and median value of 4060.20 and 1937.64 respectively, while FO and FDI have the minimum mean and median values of 0.341 and 0.341, 0.587 and 0.337 respectively.

The standard deviation measures the variability of the data from the mean. As indicated in Table 1A(see Appendix), the root mean square deviation, otherwise referred to as the standard deviation, shows how dispersed the data are from each other. The standard deviation of the variables are minimum indicating low variability except for FER with 60.652 and PR with 5467.44. The minimum and maximum values are another measure of dispersion, (the range) which indicates the difference between the highest and the lowest value of the time series.

Table 2A (see Appendix) summarizes the unit root test for time series stationarity relating to model 2. The Augmented Dickey-Fuller test of stationarity was used. The stationarity test helps to avoid the pitfall of spurious regression results. The result shows that the dependant variable was stationary at levels I (0). The independent variables were, however, stationary after the first difference I (1), except the FDI which was stationary at levels I (0). It follows therefore that all the variables are stationary both at levels and after the first difference.

Having confirmed the stationarity of the variables, the test for a long-term relationship in the selected variables was conducted. The Johansen test statistics was employed to detect any long-term relationship among the variables. The test shows the number of cointegrating vectors in the equation. The null hypothesis for the trace test statistics is that there is no long-term association among the variables, against the alternative hypothesis that there are cointegrating vectors. The output of trace statistics and maximal eigenvalue as shown in Table 3 substantiate that the variables have a long-term association.

The unrestricted cointegration rank test trace statistics hypothesized the number of co-integrations. This indicates five co-integrated equations at the 5% level of significance. Trace statistics were greater than the 0.05 critical values as expected, except for the remaining equations. The probabilities of the five co-integrated equations were found to be highly significant. This implies that the variables are co-integrated and there is a long-term relationship among the selected variables.

The results of the regression estimates in Table 7 show that financial openness, foreign exchange rate, and savings/interest have a negative sign. These indicate that there is an inverse relationship between the market capitalisation and the variables, thus the foreign exchange rate and savings/interest have not contributed largely to economic transformation in the years under review. Similarly, financial openness has not significantly contributed to the wellbeing of the capital market in Nigeria. A 1% increase in FO reduces the value of MAC by N4, 949.62 kobo. Also, a 1%

increase in SIR led to a N1, 258.54 kobo fall in the value of MAC. Furthermore, a 1% increase in inflation rate led to a N239.56 kobo fall in the MAC. However, FDI, FER and personal remittances show a positive relationship with the MAC. This implies that as these variables increases, the market capitalisation equally increases. A percentage point increase in both FDI and FER results in a N1, 074.53 kobo and N17.06 kobo increase in market capitalisation. Also, a one naira increase in PR results in a one kobo increase in MAC. It follows that FDI, FER have a significant effect on market capitalisation and PR have a weak effect on market capitalisation and thus economic transformation.

The R-square of 79% and corresponding adjusted R-square of 72% implies that the independent variables explained more than 72% of the variation in the dependent variable. The F-statistics test for the overall significance of the model with a value of 11.97 and the corresponding probability with 0.000 signifies that the model has goodness of fit or the independent variables jointly and significantly determine market capitalisation.

Table 7. Least square estimates results

Variable	Coefficient	Std. error	t-Statistic	Prob.
C	10 579.34	2615.121	4.045448	0.0007
FO	−4 949.624	2221.521	−2.228034	0.0382
FDI	1 074.533	1334.515	0.805186	0.4307
FER	17.06406	14.81435	1.151860	0.2637
SIR	−1258.540	567.5281	−2.217581	0.0390
PR	0.011211	0.011795	0.950438	0.3538
INR	−239.5584	130.0094	−1.842623	0.0810
R-squared	0.790915			
Adjusted R-squared	0.724888			
Durbin-Watson stat	1.557609			
F-statistic	11.97871			
Prob(F-statistic)	0.000014			

Source: own work.

The Breusch-Godfrey serial correlation LM test (Table 8) shows a probability Chi-square statistics of 0.1543. The null hypothesis is thereby rejected because the probability statistics is insignificant, and the conclusion implies that there is no serial correlation. Moreover, the Breusch-Pagan-Godfrey heteroskedasticity test (Table 9) indicates the absence of heteroskedaticity. The probability Chi-square of 0.3049 is insignificant at 5%. This means that the residual is homoskedastic, implying that the model specified and estimated does not suffer from the problem of heteroskedasticity. The CUSUM test (Figure 3), shows that the model is stable over time with the exception of a few years when there are variations.

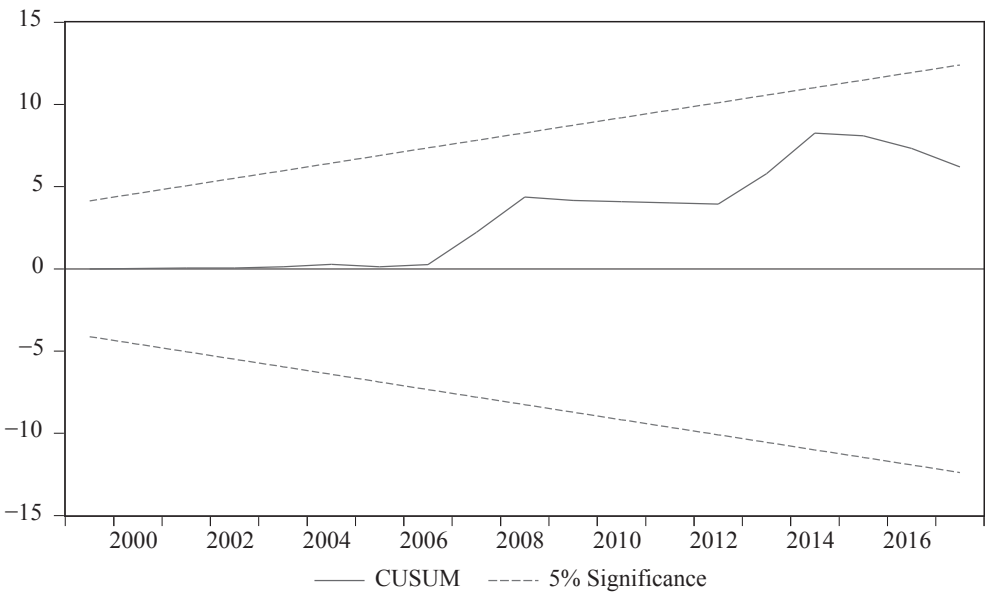**Table 8.** Breusch-Godfrey serial correlation LM test

F-statistic	2.090400	Prob. F(2,17)	0.1543
Obs*R-squared	5.132044	Prob. Chi-square(2)	0.0768

Source: own work.

Table 9. Heteroskedasticity test: Breusch-Pagan-Godfrey

F-statistic	1.207045	Prob. F(6,19)	0.3452
Obs*R-squared	7.175408	Prob. Chi-square(6)	0.3049
Scaled explained SS	5.102233	Prob. Chi-square(6)	0.5308

Source: own work.

Fig. 3. CUSUM test

Source: own work.

5. Conclusions and recommendation

This study established the effect of financial globalisation on the economic transformation of Nigeria's economy. The effects of foreign direct investment and personal remittances on *per capita* income and market capitalization were examined. Furthermore, the foreign exchange link in financial globalization was equally considered. The study found that the inflow of FDI and personal remittances to Nigeria indeed has a beneficial effect on *per capita* income and market capitalisation.

A stable and favourable exchange rate of naira to other currencies has also a positive effect on market capitalisation.

A clear implication from this finding is the fact that since FDI and PR are found to have a significant effect on economic transformation in Nigeria, adopting a more active and proactive policy to attract foreign direct investment (FDI) and encourage personal remittances (PR) inflows from overseas and Nigerians in the diaspora respectively into the economy, would largely galvanise the transformation of the economy further and facilitate economic growth. Another important implication is the fact that the foreign exchange rate generally goes hand in hand with FDI and PR. Therefore government policy directed at stabilizing and diversifying the country's stock of foreign exchange reserves (such as the recent currency exchange rate deal between Nigeria and China) could have a positive effect on both FDI and PR, thereby boosting economic transformation. Finally, this study has empirically shown that financial globalization could improve economic transformation in Nigeria – if it is properly harnessed.

The limitation to this study is the fact that it is a country-specific study. Thus, the orientation for future research would suggest the need to have comparative studies with other African countries or a panel approach examination of African regional blocs for a proper representation and generalization of the effects of financial globalization on the economic transformation of the continent of Africa.

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Appendix
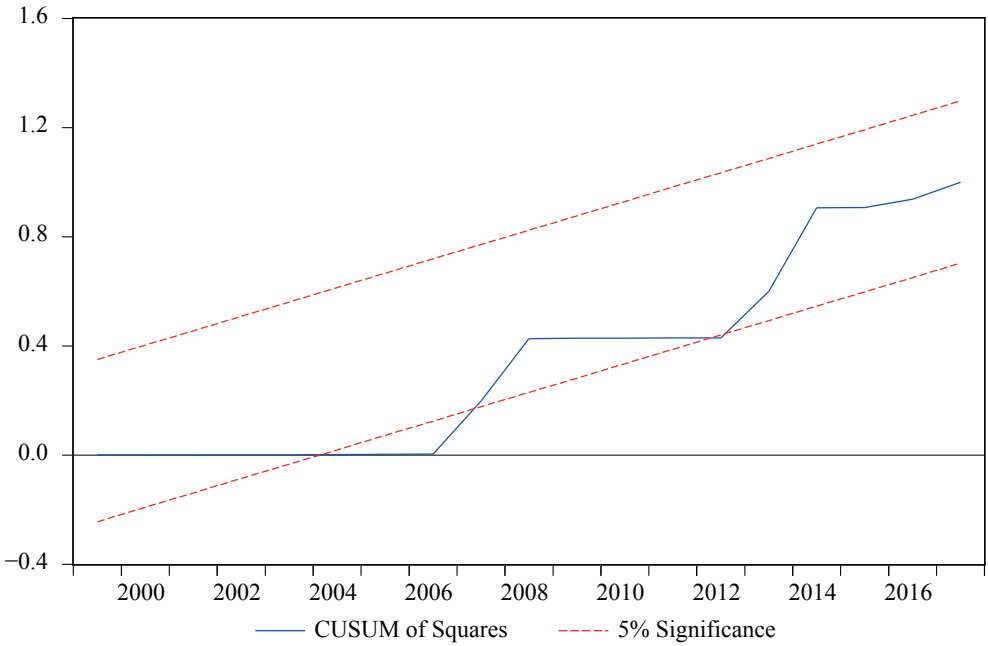
Fig. 1A. CUSUM of squares test

Source: own work.

Table 1A. Descriptive statistics on effect of financial globalisation on market capitalisation

	MAC	FO	FDI	FER	SIR	PR	INR
Mean	4 060.200	0.513	0.587	126.970	3.685	21 991.38	9.947
Median	1 937.645	0.341	0.337	124.288	3.715	3 764.635	10.213
Maximum	12 924.39	1.944	3.374	305.789	5.725	20 9558.2	17.143
Minimum	40.29000	0.032	0.013	20.581	1.410	44.71	1.055
Std. Dev.	4 295.074	0.550	0.704	60.652	1.114	54 676.44	4.326
Skewness	0.636737	1.151	2.839	1.019	−0.164	2.822	−0.236
Kurtosis	1.950226	3.649	10.904	4.727	2.521	9.434	2.205
Jarque-Bera	2.951	6.196	102.587	7.731	0.365	79.348	0.926
Probability	0.229	0.045	0.000	0.021	0.833	0.000	0.629
Sum	105 565.2	13.35086	15.25637	3 301.227	95.82083	571 775.9	258.6317
Sum Sq. Dev.	4.61E+08	7.571945	12.39658	91 967.55	31.02650	7.47E+10	467.7876

MAC – market capitalisation, FO – financial openness, FDI – foreign direct investment, FER – foreign exchange rate, SIR – saving interest rate, PR – personal remittance, INR – inflation rate.

Source: own work.

Table 2A. Results of unit root test

Variable	Level	Prob.*	First difference	Decision
FDI	−5.153340		0.0004**	
	(0)	(0)		I(0)
		0.0000**	−6.739416	I(1)
FER				
		(0)	(0)	
FO		0.0070**	−3.930144	I(1)
		(0)	(0)	
INR		0.0181**	−3.461777	I(1)
		(0)	(0)	
MC	−3.920982	0.0066**		I(0)
	(0)	(0)		
PR		0.0641*	−2.878494	I(1
		(0)	(0)	
SCI		0.0272**	−3.284748	I(1
		(0)	(0)	

* and ** indicate rejection of the null hypothesis at the 5% levels and accepting the alternate hypothesis, respectively. The 5% critical value for the augmented Dickey-Fuller test (ADF). Numbers inside parentheses are lag lengths, which are selected by the Schwarz Information Criterion (SIC).

Source: own work.

Table 3A. Unrestricted cointegration rank test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace statistic	0.05 critical value	Prob.**
None*	0.952520	243.3361	125.6154	0.0000
At most 1*	0.929515	170.1972	95.75366	0.0000
At most 2*	0.863366	106.5407	69.81889	0.0000
At most 3*	0.691663	58.76982	47.85613	0.0034
At most 4*	0.587604	30.53233	29.79707	0.0411
At most 5	0.316550	9.273824	15.49471	0.3407
At most 6	0.005791	0.139377	3.841466	0.7089

Trace test indicates five cointegrating eqn(s) at the 0.05 level; * denotes rejection of the hypothesis at the 0.05 level; ** MacKinnon-Haug-Michelis (1999) *p*-values.

Unrestricted cointegration rank test (maximum eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-eigen statistic	0.05 critical value	Prob.**
1	2	3	4	5
None *	0.998634	158.3025	46.23142	0.0000
At most 1 *	0.935679	65.85275	40.07757	0.0000
At most 2 *	0.784072	36.78748	33.87687	0.0218
At most 3	0.626999	23.66818	27.58434	0.1467
At most 4	0.472356	15.34401	21.13162	0.2655

1	2	3	4	5
At most 5	0.289199	8.192695	14.26460	0.3594
At most 6	0.002391	0.057460	3.841466	0.8105

Max-eigenvalue test indicates three cointegrating eqn(s) at the 0.05 level; * denotes rejection of the hypothesis at the 0.05 level; **MacKinnon-Haug-Michelis (1999) *p*-values.

Unrestricted cointegration rank test (maximum eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-eigen statistic	0.05 critical value	Prob.**
None *	0.952520	73.13889	46.23142	0.0000
At most 1 *	0.929515	63.65651	40.07757	0.0000
At most 2 *	0.863366	47.77084	33.87687	0.0006
At most 3 *	0.691663	28.23749	27.58434	0.0412
At most 4 *	0.587604	21.25850	21.13162	0.0480
At most 5	0.316550	9.134447	14.26460	0.2751
At most 6	0.005791	0.139377	3.841466	0.7089

Max-eigenvalue test indicates five 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: own work.

GLOBALIZACJA FINANSOWA I TRANSFORMACJA GOSPODARCZA W AFRYCE NA PRZYKŁADZIE NIGERII

Streszczenie: Celem artykułu jest zbadanie efektów finansowej globalizacji w odniesieniu do gospodarki Nigerii. Do analizy wykorzystano dane za lata 1992-2017 dostępne w biuletynach statystycznych Centralnego Banku Nigerii oraz sprawozdaniach Urzędu Statystycznego Nigerii. Za pomocą opisowej i dedukcyjnej analizy statystycznej pokazano, że globalizacja pomogła w mobilizacji bezpośrednich inwestycji zagranicznych w lokalnej gospodarce, ukazano także pozytywny wpływ transferów osobistych wynagrodzeń z zagranicy na dochód *per capita* w Nigerii. Badania dowiodły, że w rozwoju państw afrykańskich kluczową rolę odgrywają pozyskiwanie zagranicznych inwestycji bezpośrednich oraz prywatne transfery dochodów z krajów rozwiniętych. Równocześnie rządy państw powinny brać pod uwagę interesy wszystkich uczestników. Powinny też zapewnić sprawiedliwy i uczciwy system finansowy i handlowy, aby wyeliminować trwałe ubóstwo, eksploatacyjną politykę handlową i narastanie ekonomicznych nierówności w Afryce.

Słowa kluczowe: globalizacja finansowa, bezpośrednie inwestycje zagraniczne, dochód *per capita*, kapitalizacja rynku, transfery prywatne.