Advances in Social Sciences Research Journal – Vol.6, No.9
Publication Date: Sep. 25, 2019
DoI:10.14738/assrj.69.7046.
Egbulonu, K. G., & Chukuezi, O. E. (2019). Foreign Remittances And Nigeria's Economic Growth (1990 – 2018). *Advances in Social Sciences Research Journal, 6(9)* 277-290.

Foreign Remittances And Nigeria's Economic Growth (1990 – 2018)

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ABSTRACT

Between 2010 and 2017, remittances inflows averaged a whopping 20 billon US Dollars per annum, more than double the foreign direct investment [FDI] figures for the period under review and more than 500 per cent of Nigeria commercial service exports. The figures could be comparatively intimidating when remittances inflows from unapproved and informal sources are taken into account. To this end it becomes imperative to consider the impact these remittances have had so far on the Nigerian economy both at the micro and macro levels. The ADF test was used to test for stationarity. The variables were all found to be integrated at 1st difference so we used the OLS technique to analyze our data. Results show a positive relationship between foreign remittances and economic growth. Also a strong two-way relationship was established between foreign remittances and foreign external reserve. Foreign remittances have come to be a major source of income for Nigerian families and households. Infant mortality rate which was included in our model as a measure of social welfare and human development was also seen to be on the decline and having no causality relationship with foreign remittances. This was rightly so because, as the study shows, the expenditure pattern of foreign receipts by households is tilted towards consumption. The study recommends the need for the country to strengthen the institutional framework required to harness the benefits of foreign remittances.

Keywords: foreign remittances, Infant mortality rate, Gross Domestic Product per capita, Migration.

INTRODUCTION/BACKGROUND OF THE STUDY

Of the various economic indices that forms the basis for the measurement of economic growth, remittances ranks as a relatively new concept and somewhat remote in its relative contribution.

Various schools of thought over the years have tried to measure economic growth in terms of GDP, per capital income, employment rate, investment and GDI.

However, the challenge of labour mobility and migration in developing economies has opened up recently, a sustained interest of development economists on the subject of Remittances.

Adolfo, et al [2012] observed that workers' Remittances – transfers from international migrants to family members of their country of origin – represent one of the largest sources of financial flows to developing countries. The U.S State Department, on the other hand, has been much more forward about suggesting that remittances can play an important role In development finance and promoting economic growth. In a 2005 document "the US Approach

to international Development: Building on the monetary consensus (US department of state 2005) labels Remittance as a "development resources" and places remittance as a foreign private investment.

According to a World Bank Human Development Report [2009], Nigeria records an official total immigration of 1,127,668 – comprising of 1,000,000 total emigrants and total refugees of 8,614 between 2005 - 2010, out of the total emigrants 10.6% of that population are either skilled, professionals or at least has a tertiary education. This does not include hundreds of thousands of both skilled and unskilled labour force who leaves the borders of the country through unapproved routes into Europe, America Asia and even other African countries. This emigrants form a sizeable proportion of the Nigerian population and inflows both for consumption and capital on investment.

How far these inflows affect the macro economy depends on the expenditure pattern of these beneficiaries. Given the increasing importance placed on remittances as a source of development finance, it is, therefore, critical to consider the subject matter in terms of its impact on the Nigerian economic growth. While migration can have both positive and negative economic, social and cultural implications for countries of origin, remittances are the most tangible and least controversial link between migration and development.

Statement of the Problem

Between 2010 and 2017, remittances inflows averaged a whopping 20 billon US Dollars per annum, more than double the foreign direct investment [FDI] figures for the period under review and more than 500 percent of Nigeria commercial service exports. The figures could be comparatively intimidating when remittances inflows from unapproved and informal sources and taken into account. To this end it becomes imperative to consider the impact these remittances have had so far on the Nigerian economy both at the micro and macro levels.

For instance, Ratha (2013) argued that families spend remittances disproportionally on human capital building areas compared to how they spend other forms of income. He also noted that since remittances are countercyclical financial flows, they behave very differently than private capital flows. Consequently the merit of remittance flow might lie more on increasing the levels of income for the poor rather than the growth economy as a whole. This study, therefore, seeks to investigate the causal link between remittances and economic growth measured in terms of education, good health, low rate of poverty, sustainable economic growth in agriculture.

LITERATURE REVIEW

International Migration and Workers' Remittances.

The United Nations (2002) reported that more than 175 million people- 3 percent of the world population live and work in countries other than their home countries and send a considerably high proportion of their income back home to their families and relatives. The number of migrants and value of financial inflow in the actual sense is a poor reflection of the actual figure considering the considerable huge number of illegal and forced immigrants and cash flows from unofficial sources. Also, Adolfo, et al [2012] observed that workers' remittances – transfers from international migrants to family members of their country of origin – represents one the largest sources of financial flows to developing countries.. In a 2005 document "the US Approach to international Development: Building on the monetary consensus (US department of state 2005) labels Remittance as a "development resources" and places remittance as a Foreign Private Investment (FPI).

Remittances and Sustainable Economic Growth

Many studies have attempted to appraise the impact of remittances on economic growth and poverty alleviation. We shall approach the impact of foreign remittance in light to its contribution to poverty alleviation, quality health care delivery, access to basic and tertiary education and maternal and infant mortality rates.

Impact of Remittances on Health Care and Education:

It has been often argued that remittance inflows, unlike other export inflows to developing countries have not led to sustainable economic growth because recipients squander these funds on consumption. Most recipients of remittance in Nigeria quickly thinks of marrying new wives, buying exotic cars, building residential houses and many other forms of self-aggrandizement.

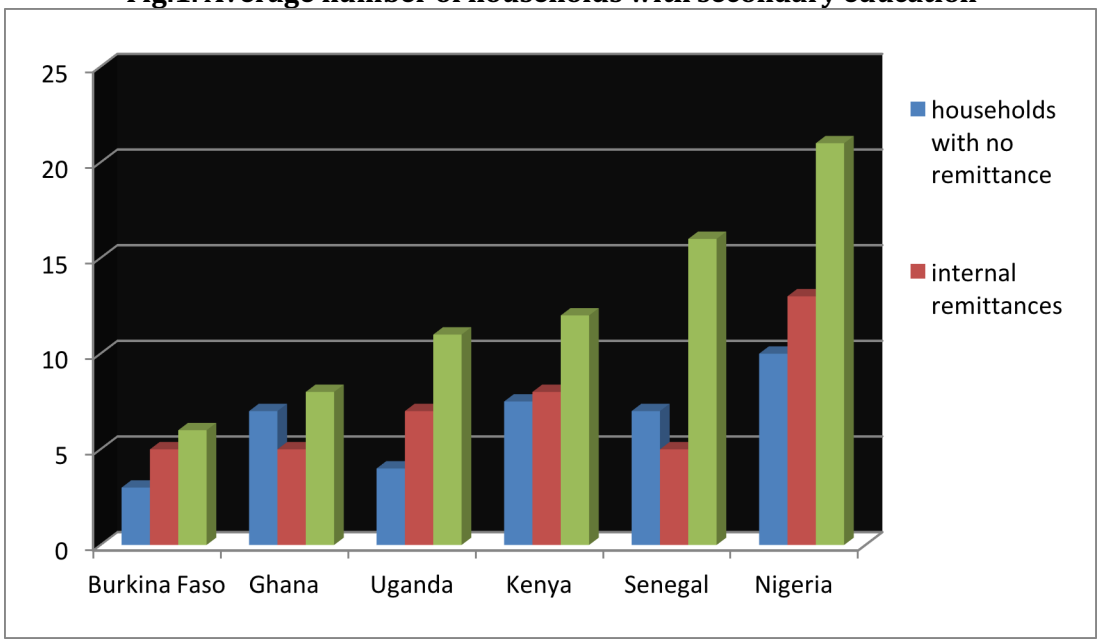
However, recent research has shown that they have been a relative rise in effective education and quality health care service among recipients of this income compared to others. Bertha (2010) observed that remittance receiving households make higher investment in health care and education than those households that do not receive this type of income. He argued that in developing countries, remittance receiving households have been found to have lower infant mortality rates, higher birth weights as well as higher health related knowledge than similar households that do not receive remittances

Also, migration and remittance has been observed to increase educational attainment for households in Nigeria who receive remittances either locally or internationally.

In recent years, Nigeria has witness a surge in the number of its citizens going abroad for the attainment of quality education and better healthcare services and over this period it has been seen that households who receive remittances have dominated the list of emigrants.

Bertha (2010) did a cross country comparison of six Sub Sahara African countries including Nigeria. Fig. 1 shows a strong and positive correlation between the average number of household members with a secondary education and a receipt of remittances from outside the continent

Fig.1. Average number of households with secondary education



Source: DillipRatha- 'Migration and Post 2015 Development Agenda' (Power point Presentation to Joint Reflection on Migration and Development, The Graduate Institute, Geneva, May 30, 2015)

Impact of Remittance on Poverty Level

The prevalence of poverty on developing economies for the first place is the primary cause of mass major migration. Adolfo, et al (2009) attempted to use labour force growth as a co-variable in analyzing the impact of remittance in a developing economy like Nigeria and concluded that remittances receipts have been found to have a negative impact on labour force participation due to the fact that remittances inflow are simple income transfers and that recipient households may rationally substitute unearned remittance income for labour income and in such divert resources to the consumption of leisure goods.

This argument has been put forth earlier in this paper. However some development economists have a contrary view. Ratha (2010) does not agree that there is an inverse relationship between human capital development and remittance inflows. Rather, they observed that remittance-receiving households have higher incomes, lower percentage of consumer spending and lower incidences of extreme poverty relative to similar households that do not receive remittances. It is observed that remittance-receiving households have better access to quality education and healthcare, lower infant mortality and maternal mortality rate, better access to clean water and electricity.

These are the indices of human development. Hence it is argued that for remittance-receiving households, there is an inverse relationship between remittance inflows and poverty rate. Like Ratha (2010) puts it- "remittance increases household incomes and are, therefore, an anti-poverty force in developing countries like Nigeria'

Adams and Page (2005) did an impact analysis using a large, nationally representative household survey consisting of 7,276 Guatemalan households' respondents and predicted income functions, compared the poverty headcount, poverty gap, and squared poverty gap of households that received international remittances with those of households that did not. The study reveals that international remittances decrease poverty, creating a quantitatively larger effect on the severity of poverty rather than on the proportion of people living in poverty. It

observes that remittances receipts increases the disposable income of households and when included in expenditure, reduced poverty by 19.8 percent

It is also observed that since remittances are countercyclical financial flows, meaning that the flow of money increases when financial markets declines, they behave very differently from private capital flows. Remittances tends to rise in times of economic downturns, political and civil crisis and natural disasters because migrants living abroad send home more money to help their families in response to increased needs. For instance, remittance inflows into Nigeria USD21, 967billion in 2014 and by 2015 the figures have risen higher in response to the economic depression experienced by the country. However, foreign direct investment for the period 2015 – 2017 shirked considerably to 0.4 percent – it's lowest for the last ten years.

When political instability struck Egypt during the Arab spring, investors and donor agencies pulled out while remittances increased. Between 2009 and 2011, foreign direct investment (FDI) in Egypt falls from USD 9.5 billion to a net negative of USD 483 million. The country also lost three quarters of its official development assistance as donations plummeted from USD 1.7 billion IN 2008 down to USD 410 million in 2011. Meanwhile remittance inflows to Egypt rose from USD 7.15 billion in 2009 to USD 14.32 billion in 2011 and USD 20.5 billion in 2013.

Theoretical Framework

Remittances are transfers of money sent to home country by individuals working abroad. it is mainly household income and is sent back through formal channels such as cash or in kind and through informal channels as well. Rapoport and Docquier (2006) listed the following reasons as motives behind individuals' decision to remit:

- Altruism- migrant's willingness to help family in home country
- Insurance- whereby remittance acts as an additional source of fund in situations of adverse risks and shocks
- Investment- whereby remittance is used for investment at home or to ensure potential family inheritance. However, there is no consensus on the exact motive why a migrant remit. A combination of altruistic, insurance and investment motives is mostly found in empirical studies. Brown and Poirine (2005) pointed out that motivations to remit vary according to destinations, gender and household composition.

The Neoclassical Approach to Migration and Remittances

The neoclassical approach can be traced back to Smith (1776), Ravenstein (1889) and Borjas (1987) who postulated that an 'immigrant market' exists between countries. Potential host countries select suitable migrants through immigration policies for the human physical capital gain. In the same way a migrant will choose to maximize his/her well-being. Other constraints might include immigration regulations imposed by potential country and emigration regulations by source country. The central argument is to maximize wages; so the theory predicts a linear relationship between wage differential and migration with the assumption that there is full employment. Bauer and Zimerman (1999) as well as Borjas (2008)assert that wage differential between regions cause the labour to shift from a low wage region to a high wage region. Essays, UK (2018) observes that the neoclassical approach has been particularly criticised for ignoring the effects of hosting and sending countries,markets imperfections, asymmetric information, relative deprivation, the importance of politics and policies, which are accounted as distortions and additional migration cost

The Economics of Migration

The New Economics of Migration (NEM), proposed by Stark and Bloom (1985) stipulates that migration decisions are not taken by one individual only, but rather by families and

households. People act collectively not to maximize income in absolute terms but also relative to other households. The theory of relative deprivation predicts that the chance of sending migrants abroad is greater when the amount of income earned is higher and income inequality is greater compared to the reference group. Stark and Taylor (1989) showed that relative income had a greater impact than absolute income on international migration based on a sample of Mexican households, except at the two ends of income distribution.

The Human Capital Theory

Borjas (1990) put forward that a migrant will estimate the cost and benefit associated with the displacement, and will migrate if the net return is positive and his destination would be where the expected discounted net returns are greatest over some time horizons. The human capital theory is a microeconomic equivalent of the macroeconomic model of individual choice.the theory highlights the socio-demographic aspect of the individual as being a significant determinant in the decision making process (Bauer and Zimerman, 1999).

Network Theory

Bauer (1995) advocates that migration can become a self-perpetuating process because the cost and risk associated with migration are reduced by the existence of a diaspora or networks. Network theory increases the profitability of migration as it reduces costs and risks while at the same time increases net returns. The fact of knowing people through friendship and shared community decreases relatively the monetary and psychic costs related to the displacement because of the availability of information.

Push and Pull Migration Theory

Ravenstein's (1889) theory of 'push and pull' migration states that migration is governed by unfavourable conditions assessed in terms of push and pull effect. Zimmerman (1994) later defined pull and push migration as changes in aggregate demand and aggregate supply curves of the receiving country. Internal factors affecting aggregate demand in the receiving country are classified as determinants on the pull side while internal or external factors on the sending country are classified as determinants on the push side

EMPIRICAL REVIEW

Remittances on Economic Growth

Prandhan et al (2008) find that remittances have a small positive impact on growth. A 36 country cross sectional study using a linear regression model in which remittance forms one of five variables reveals an insignificant and inconsequential relationship between remittance and economic growth. Abu Sadique et al (2010) investigated the impact remittances have on the economics of India, Bangladesh and Sir Lanka. They employed various econometric tools-Granger test, unit root test and co integration and causality to analyze a time series data for the period 1976-2006. The analysis reveals that the two time series, remittances and economic growth both 1 (1) and are not co integrated. Also, the test for causality between remittance and economic growth shows that there is only a one very causal relationship from remittance and economic growth in Bangladesh; no causal relationship between remittance and economic growth in India, but in Sir Lanka, a two-way directional casualty is found.

It is, therefore argued that the link between remittance and economic growth in these countries is determined by a number of endogenous factors which includes but not limited to cost of remittances exchange rate regime, structure of financial institutions, investment and saving scheme, as well as the pattern of the precipitants of remittances is a major determinant of the impact that remittances will have both the micro and macro level.

The consumption pattern of the recipients determines the impact that remittances will have. If more and more percentage of remittances is diverted to consumption, remittance will prove to have an insignificant effect on economic growth and if a good percentage of the remittances is saved and invested, remittances will show to have at least a one-way causal relationship with economic growth.

Remittances on Health Care

Reanne et al (2016) examined the impact of remittances sent from the United States to Mexico on access to improved health care in Mexico. Data from a 2006 survey of 2 localities in the municipal city of Tepoztla´ N'Morelos, Mexico was used on a logistic regression to determine whether household remittance expenditure on health care was associated with type of health insurance coverage. The majority of individuals in the sample lived in households that reported never having received remittances (around 90%). Of those households that had received remittances, over twice as many had spent remittances on health than had not (7% versus 3%). Results of the study shows that individuals who lacked insurance coverage or who were covered by the Seguro Popular program were significantly more likely to reside in households that spend remittances on health care than were individuals covered by an employer-based insurance program. The study concluded that Improving the coverage and quality of care within Mexico's health care system will help ensure that remittances serve as a complement, and not a substitute, to formal access to health care.

Another cross-country study on 84 countries by Chauvet, Gubert, and Mesplé-Somps (2009) revealed remittances reduced both infant and child mortality, but the reduction was higher for the richest households compared to the poorest households. In SSA, Amakom and Iheoma (2014) using 2SLS estimation found 10% rise in remittances increase life expectancy at birth by 1.2% on average. This impact was larger than those caused by public health expenditure per capita; which was 0.5% on average for every 10% rise in public health expenditure per capita Zhunio, Vishwasrao, and Chiang. (2012) conducted a cross-country study on 69 low- and middle income countries using a two-stage least square (2SLS) econometric technique. Their results showed remittances through its effect on private educational spending, have a higher effect on educational outcomes than public expenditure on education. Also, the effect of remittances at the secondary level was found to be higher than that of the primary level. The elasticity shows that a 1% rise in real remittances per capita leads to 0.12% rise in the share of students registered in the secondary school and 0.09% rise in primary completion rate.

Remittances on Housing

Osili (2004) conducted an investigation into the impact of foreign remittances on improved housing in Nigeria. Data collection for the study was carried in two stages. The first stage involved conducting surveys among the migrant sample composed of 112 Nigerian households in Chicago, Illinois in the United States with detailed information on demographic variables, migration experience, remittances, and assets in the United States and Nigeria. The second stage of fieldwork took place in the migrants' home towns in South Eastern Nigeria which involves the researcher carrying out a field survey of 61 home families in Nigeria using the names and addresses supplied by the initial U.S. sample and taking into consideration demographic factors in the total of 71 home towns in the sample including population, distance to state capital, and number of post-secondary institutions, information on access to a major road, electricity, and potable water. Adopting a Tobit Likelihood model, housing investment $\boldsymbol{h_i}$ was specified as the dependent variable while migrant characteristics $\boldsymbol{m_i}$ (proxied by age of household head, years of schooling, cumulative US experience in months, number of Nigerian trips, per capita household annual income and ownership of inherited land in home town), home/family attributes $\boldsymbol{O_L}$ and community attribute $\boldsymbol{V_i}$ were specified as the explanatory

variables. The analysis shows that migrants' characteristics play an important role in the housing investment decision. The study finds that older migrants are more likely to invest in housing in the home town. An additional year in the migrant's age increases the likelihood of undertaking housing investments by about 3 percentage points. Furthermore, older migrants invest a larger share of household income in their housing investments. Also, it was found that the migrant's ties to the home community (measured by number of trips to the country of origin) are positively and significantly associated with the probability of investing, as well as with the share of income invested in housing in the home community. The study recognized the fact that housing investments may be the first stage of a broader investment relationship between migrants and their countries of origin. Institutional knowledge gained through housing investments in their community of origin may be applied toward a wide set of investment objectives, particularly where home family and home town association networks mitigate some of the risks associated with investing in the home community.

METHODOLOGY

Secondary data on Foreign Personal Remittances are sourced from the United Nations Center for Trade and Development (UNCTAD), World Bank and Central Bank of Nigeria (CBN) Publications for various years while data on Balance of Payments and the infant mortality rates (BOP) are sourced from the Index Mundi Statistical Bulletin and various statistical reports of the World Bank and world Health Organization (WHO). The data was tested for stationarity using the Augmented Dickey-Fuller unit root test and long run relationship among the variables was ascertained using the Unrestricted Cointegration Rank test (Trace test). An OLS regression technique and a Granger Causality test were used to estimate the individual and joint relationship between the dependent and explanatory variables.

Model Specification

The model specification adopted in this model was based on the empirical works of Sadique, Aet al(2010) and Pradhan et al (2008) who in their separate works specified GDP per capita as the dependent variable and foreign external reserve and Balance of payment (BOP) as the explanatory variables. We introduced infant mortality rate into our model as a proxy variable for social welfare and number of observations extended to the most recent past-2018. In functional form, the model is specified as thus:

$$GDPC = F \{FOREM, EXTRESV, REM/GDP, INFMOR, BOP\}$$

Where
GDPC = GDP per capita @ 2010 constant prices
FOREM = Foreign Remittances
REM/GDP = Foreign Remittances as a percentage of the GDP
INFMR = Infant Mortality Rate
BOP = Balance of Payment

The functional model in econometric form is expressed by taking the logarithm of both sides of the model to linearize the relationship among the variables;

$$\text{Log (GDPC)} = \beta_0 + \beta_1 \log (\text{FOREM}) + \beta_2 \log (\text{EXTRESV}) + \beta_3 \log (\text{REM/GDP}) + \beta_4 \log (\text{INFMR}) + \beta_5 + \log (\text{BOP}) + U$$

Where U is the error term.

Null Hypothesis:

H_{O1}: Workers Remittances have no effect on the economic growth of Nigeria.

H_{O2} : There is no relationship between Workers Remittances and Poverty rate in Nigeria.

Analysis And Interpretation Of Results.

Table 1: Unit Root Test

Variables	ADF test statistic (Level)	ADF test statistic 1st difference	Order of integration
GDPC	-2.071998	-3.597595	1(1)
FOREM	-2.956886	-8.146411	1(1)
EXTRESV	-1.448025	-7.273401	1(1)
REM/GDP	-1.982367	-6.317434	1(1)
INFMOR	-2.036977	-8.656008	1(1)
BOP	-2.516956	-6.536578	1(1)
5% critical value			

Source; Extracted from Eviews 9 output.

The table shows that all the variables are all stationary at 1st difference and therefore, have no mixed order of integration. The determination of the order of integration of the variables establishes the fact that the statistical properties of the variable are constant and do not change over time. We go ahead to test for cointegration using an unrestricted cointegration rank test (Trace test).

Analysis and interpretation of Regression Results.

Table 2 Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.780102	115.6648	95.75366	0.0011
At most 1 *	0.767274	74.77086	69.81889	0.0190
At most 2	0.459489	35.40777	47.85613	0.4267
At most 3	0.316623	18.79630	29.79707	0.5076
At most 4	0.219491	8.517174	15.49471	0.4119
At most 5	0.065405	1.826346	3.841466	0.1766

Trace test indicates 2 cointegratingeqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Table 3. Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.780102	40.89397	40.07757	0.0404
At most 1 *	0.767274	39.36309	33.87687	0.0100
At most 2	0.459489	16.61147	27.58434	0.6134
At most 3	0.316623	10.27912	21.13162	0.7180
At most 4	0.219491	6.690828	14.26460	0.5263
At most 5	0.065405	1.826346	3.841466	0.1766

Max-eigenvalue test indicates 2 cointegratingeqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Table 4.OLS Regression analysis showing the impact of Foreign Remittances on Economic Growth.

Dependent Variable: LNGDPC
Method: Least Squares
Date: 05/10/19 Time: 06:41
Sample (adjusted): 1995 2018
Included observations: 24 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.321065	0.562495	9.459755	0.0000
D(LNFOREM)	0.033256	0.009740	3.414374	0.0486
D(LNEXTRESV)	0.263577	0.103115	2.556159	0.0204
D(REMGDP)	0.028964	0.007723	3.750356	0.0108
D(INFMR)	-0.010131	0.001143	-8.863517	0.0322
D(LNBOP)	-0.032903	0.019528	-1.684859	0.1103
ECM(-1)	-0.387008	0.087928	-4.401419	0.0100

R-squared	0.824696	Mean dependent var	7.533816
Adjusted R-squared	0.762824	S.D. dependent var	0.260279
S.E. of regression	0.126758	Akaike info criterion	-1.054584
Sum squared resid	0.273148	Schwarz criterion	-0.710985
Log likelihood	19.65500	Hannan-Quinn criter.	-0.963427
F-statistic	13.32905	Durbin-Watson stat	1.977503
Prob(F-statistic)	0.000013		

Estimation Command:
==========
LS LNGDPC C LNFOREM LNEXTRESV REMGDP INFMR LNBOP ECM(-1)

Estimation Equation:
==========
LNGDPC = C(1) + C(2)*LNFOREM + C(3)*LNEXTRESV + C(4)*REMGDP + C(5)*INFMR + C(6)*LNBOP + C(7)*ECM(-1)

Substituted Coefficients:
==========
LNGDPC = 5.321065 + 0.033256*LNFOREM + 0.263577*LNEXTRESV - 0.028964*REMGDP - 0.010131*INFMR - 0.032903*LNBOP - 0.387008*ECM(-1)

The regression result on table 4 shows that a positive and significant relationship between Foreign Remittances and economic growth of Nigeria. C- value of 0.033256 means that for a unit increase in foreign remittances, the GDP per Capita will grow by 0.033 units and a probability value of 0.0486 implies a significant relationship between the two parameters. This confirms our a priori expectation and earlier results arrived by Sadique et al (2010) and Pradhan et al (2008).

External reserve and Remittance to GDP ratios are also found to have positive and significant relationships. A value of 0.263577 and 0.028964 shows that unit increase in External reserve and Remittance to GDP ratios will cause a 0.264 and 0.29 increase in the per capita GDP respectively. The variables are also significant with probability values of 0.0204 and 0.0108 respectively.

The result shows that infant mortality rate and balance of payment both have negative impacts on the per capita GDP with increase unit increase in infant mortality rate leading to a significant decrease in the GDP per capita by 0.010131 units in tandem with our a priori expectation that social welfare is maximized when the infant mortality rate is reduced to the

barest minimum. However, the BOP a 0.032903 negative impact on the economy though at an insignificant rate with a probability of 0.1103. the intercept of the model is estimated at 5.321065, meaning that the per capita GDP will increase by 5.321065 units if all the explanatory variables in our model is zero.

The variables show joint impact on the per capita GDP with an F-statistic value of 13.32905 and jointly significant at with a probability value of 0.000013.

The adjusted coefficient of determination of 0.762642 or 76% shows a good fit meaning that 76.2% of the variation in GDP per capita are explained by the explanatory variables included in our model.. The result further shows that the error correction term (ECM-1) is negative and significant. The ECM-1 estimated at -0.387008 shows the speed of adjustment from the short-run to the long- run equilibrium of the model. This means that about 38% of the error in our model is corrected in each time period. The Durbin-Watson value of 1.977503 approximately 2 indicates the absence of autocorellation in the error term.

Table 5. Pairwise Granger Causality Tests

Null Hypothesis:	Obs	F-Statistic	Prob.
LNFOREM does not Granger Cause LNGDPC	27	0.71331	0.5010
LNGDPC does not Granger Cause LNFOREM		2.94553	0.0735
LNEXTRESV does not Granger Cause LNGDPC	27	2.34919	0.1189
LNGDPC does not Granger Cause LNEXTRESV		2.07419	0.1495
REMGDP does not Granger Cause LNGDPC	27	0.46090	0.6367
LNGDPC does not Granger Cause REMGDP		1.02627	0.3749
INFMR does not Granger Cause LNGDPC	27	0.17331	0.8420
LNGDPC does not Granger Cause INFMR		1.56495	0.2315
LNBOP does not Granger Cause LNGDPC	27	2.09432	0.1470
LNGDPC does not Granger Cause LNBOP		0.37166	0.6938
LNEXTRESV does not Granger Cause LNFOREM	27	7.86560	0.0026
LNFOREM does not Granger Cause LNEXTRESV		8.75374	0.0016
REMGDP does not Granger Cause LNFOREM	27	3.48309	0.0485
LNFOREM does not Granger Cause REMGDP		0.44006	0.6495
INFMR does not Granger Cause LNFOREM	27	0.42442	0.6594
LNFOREM does not Granger Cause INFMR		0.32387	0.7267
LNBOP does not Granger Cause LNFOREM	27	0.38424	0.6854
LNFOREM does not Granger Cause LNBOP		0.33927	0.7160
REMGDP does not Granger Cause LNEXTRESV	27	5.67736	0.0103
LNEXTRESV does not Granger Cause REMGDP		0.43517	0.6526
INFMR does not Granger Cause LNEXTRESV	27	0.07020	0.9324
LNEXTRESV does not Granger Cause INFMR		0.53624	0.5924
LNBOP does not Granger Cause LNEXTRESV	27	0.15857	0.8543
LNEXTRESV does not Granger Cause LNBOP		0.18923	0.8289
INFMR does not Granger Cause REMGDP	27	1.16779	0.3296
REMGDP does not Granger Cause INFMR		0.53455	0.5934

Table 5 shows that a two-way dimensional causality effect exists between Foreign External Reserve and External Remittances while a one-way dimensional causality effect is established between GDP per capita and foreign remittances, between GPD and Foreign remittances as well as between GDP and External Reserve. These causality relationships and the dominance of foreign remittances supports our findings that migrant remittances impacts the Nigerian economy positively.

CONCLUSION/RECOMMENDATION.

Analysis of our data shows a positive relationship between foreign remittances and economic growth in support of our a priori expectation that in the past few decades, foreign remittances has come to be a major source of income for Nigerian families and households. Infant mortality rate which was included in our model as a measure of social welfare was also seen to be on the decline and this shows how important the remittances has been in stimulating the social welfare amongst Nigerian households who receive remittances.

Adolfo (2009) argued that when workers' remittances are mostly diverted to consumption and luxury it seems to have little or no effect on the macroeconomic growth of the economy. It is therefore recommended that the country strengthen its financial institutions to ensure that such hurdles as high cost of transfers that discourage individuals from using formal and controlled channels of remitting their foreign earning back home are dismantled.

The growing increase in remittances however, has its own counterproductive effects of brain drain on the country. The implication is that in line with the human capital theory, professionals and technicians would prefer to work outside where the wages are higher and this could mean brain drain for the country. The entrepreneurs should be encouraged to create jobs that can engage the teeming migration of professionals from the country.

It is, therefore, necessary to point out that while workers remittance is effective in poverty reduction amongst recipients of such income expressed in form of school enrolment, improved health care services and infant and maternal mortality rate compared to non-recipients, not so much could be said about its impact on the macro economy.

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