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# EFFECT OF MIGRANTS' REMITTANCES ON INCOME INEQUALITIES IN NIGERIA

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## Abstract

*The study empirically examined the effect of migrants' remittances and income inequality in Nigeria from 1990 -2022. The study used secondary data which were collected from Central Bank Statistical Bulletin and World Bank Indicator. The data collected were analysed using error correction method (ECM) and the result revealed that migrants' remittances have a positive and significant relationship on income inequality in Nigeria during the period under investigation, while inflation rate has a negative and non-significant relationship with income inequality in Nigeria. It was therefore recommended that government should put in place policies that maximize the benefits of migrants' remittances and maximize their positive effects in Nigeria. Also, complementary policies that help mitigate any adverse income distribution consequences of migrants' remittances should be designed. Such mitigating polices may range from setting up or improving safety nets, better labour policies and institutions.*

***Key word***s: Income Inequality, Migrants' Remittances, Gini Coefficient, Inflation Rate

## 1. Introduction

The issue of income distribution has long been a focal point for economists. Recently, there has been a resurgence of interest and mounting concern regarding the rising levels of income inequality, both domestically and globally, and their adverse effects on economic growth and social stability (Birdsall, 2005; Sunday &

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Amayo, 2011; Osamwonyi & Obomeile 2015). Specifically, the 1990s witnessed resurgence in theoretical and empirical attention by economist to the distribution of income and wealth. This is because high level of income inequality produces an unfavourable environment for economic growth and development (Osamwonyi & Obomeile 2015). In Nigeria, the rapid economic growth that was witnessed between 1965 and 1974 was accompanied by a serious income disparity which is believed to have widened substantially (Clarke *et al*, 2003; Oyekale, et al, 2004). Despite the past policy interventions to correct this abnormality, the problem of income inequality has increased, consequently increasing the poverty depth in some parts of the country.

According to the International Monetary Fund (IMF, 2009), global output has grown by more than 4% per year over the past decade. World Bank estimates show that over the period of 1981-2005, the number of people living on less than $1.25 per day has fallen from 1.9 to 1.4 billion. However, between the period of 1980-2002 the global inequality has increased with a Gini coefficient of 64.8% to 70.8%; an increase of approximately 6.0% (World Bank, 2009). Regional disparities in standards of living and income inequalities are mounting issues in both the developing and the developed world and this has raised serious questions for policy makers globally on how to tackle these disparities.

Higher level of income inequality exists in many nations of the Sub-Sahara Africa (SSA), Nigeria inclusive and it is a major characteristic of a developing economy. This can be further buttressed by the widening dimension of poverty and economic problems in many of these nations (Osamwonyi & Obomeile 2015). This differential in income received most times account for rural-urban migration and country-country migration. Most times, inhabitants of rural areas migrate to the urban areas in search of the proverbial pot of gold or greener pastures because they feel the urban areas hold more opportunities for them than the rural areas. This influx of rural dwellers into urban areas results in over-population and over-taxation of the amenities available in the urban areas. The same can be said of people migrating from their countries to foreign countries in search of greener pastures. Remittances of money and goods by these migrants to their communities of origin can have important impacts on the distribution of households' income and welfare. Given the above circumstances, this study examined empirically the effect of Migrants' remittances on income inequality in Nigeria.

## 2. Review of Current literature

### Income Inequality

Income inequality refers to disparities in the distribution of economic assets and income. The term typically refers to inequality among individuals and groups within a society but can also refer to inequality among nations. In other words, income inequality generally refers to inequality of outcome and is related to the idea of inequality of opportunity. Bakare, (2011) defined income inequality as a situation whereby money received during a certain period especially as payment for work or interest on investment are in different sizes, degrees or circumstances, and so on. Osamwonyi and Obomeile (2015) averred that Income inequality refers to disparities in the distribution of economic assets and income. The term typically refers to inequality among individuals and groups within a society but can also refer to inequality among nations. In other words, income inequality generally refers to inequality of outcome and is related to the idea of inequality of opportunity.

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Scholars agreed that income inequality is detrimental to economic growth in any nation of the world whether developed or developing **(**Barro, 2000; Morduch & Sicular 2002; Oguntuase, 2007; Osamwonyi & Obomeile 2015). Barro concluded that the growth effect of income inequality is even greater in poor countries than in rich countries. In democracies with majority rule or in autocracies where the people have little or no influence, if the mean income exceeds the median income redistribution occurs. According to Osamwonyi and Obomeile, the redistributive policies retard growth in those economies. Income inequality causes socio-political unrest and it has been directly linked to a reduction in happiness levels as well. This reduction is greater among those at lower income levels and those with less education. As a result, the poor begin to commit crime, riots and other disruptive activities. This increase in unrest hurts the economy and more importantly decreases the quality of life of all people in the country, especially those without the means to protect themselves from such unrest (Alayande, 2003)

**Migrants' remittances**

Migrants' remittance is the transfer of money by a foreign worker or migrant to his or her home country. Money sent home by migrants constitutes the second largest financial inflow to many developing countries. Remittances contribute to economic growth and to the livelihoods of people worldwide. Moreover, remittance transfers can also promote access to financial services for the sender and recipient, thereby increasing financial and social inclusion (Obomeile & Musa, 2023). Also, they foster in the receiving countries a further economic dependence on the global economy instead of building sustainable local economies (Englama, 2009). Migrants' remittance is an important and growing source of foreign funds for several developing countries. At present, these inflows have more than doubled the official aid received by developing countries. If remittances sent through informal channels are included then total remittances could be as much as 50% higher than the official record (World Bank 2010; IMF 2009). The remittances of money and goods by migrants to their communities of origin can have important impacts on the distribution of household income and welfare. This is especially the case in developing economies, where households earnings are low, inequality is often pervasive and domestic or international migration of family members can provide a major source of income through the remittance of wage earnings (Obomeile & Musa, 2023).

Nigerians living abroad are estimated to have remitted home N1.727 trillion ($11 billion), the highest for any African country. This figure made Nigeria the Seventh biggest recipients of money remitted to the home countries by citizens living abroad. A report titled "Outlook for Remittance Flows 2012-14" showed that the top global recipients of remittances estimated for 2011 are; India ($58 billion), China ($57 billion), Mexico ($24 billion) and the Philippines ($23 billion). Other large recipients include Pakistan, Bangladesh, Nigeria, Vietnam, Egypt and Lebanon. The report further showed that remittance flows to developing countries totalled $351 billion in 2011 and worldwide remittances including those to high income countries, reached $406 billion in 2011 according to the newly updated World Bank brief. Despite the global economic crisis that has impacted on private capital flows, remittance flows to developing countries have remained resilient, posting an estimated growth of 8 percent in 2011, (Word bank 2010).

**Measurement of Income Inequality**

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There are various ways of measuring income inequality. In the study by Obomeile and Osamwonyi, (2015), inequality measures can be classified into two broad types; the normative and the objective measures.

***The Normative Measures***

The normative measures usually deal with inequality from a view of its effect on a social welfare assignation. Here, inequality is not seen objectively and its measurement involves normative perspectives such as ethics, welfare or utility levels. Possibly, the most important measures of this type are the ones that employ a social welfare function for the estimation of inequality persistence. The logic behind this measure is rather straightforward; it arises from the notion that any measure will inevitably involve an implicit normative judgment in that there are certain distributions better for everyone than others (Dalton, 1920; Sen, 1973). The main disadvantage of this measure is that maximizing utilities does not take into account the distribution within the individuals as well as the transfers that may occur among them, thus it does not provide a useful tool for evaluating inequality and its dynamics within groups.

***The Objective Measures***

The objective measures of inequality include among others; relative mean deviation, the entropy measures such as the Theil index, Hoover index, Gini coefficient. The main feature of the objective measures of inequality is that they are characterized by the use of statistical and mathematical tools for the estimation of income dispersion among a set of individuals.

**Empirical Review**

Acosta, Calderon, et al. (2007) conducted a cross-country analysis to explore how remittances are contributing to poverty in the Latin America and the Caribbean. The study used a different econometrics approach which allows them to estimate the separate effects of remittances on two determinants of poverty: the average income growth and the degree of income inequality. The results suggested that remittances exert a positive and significant effect on income growth and cause a slight reduction in inequality.

Acosta, et al (2008), based on ten Latin American countries, the authors found that international remittances have negative, albeit relatively small inequality-reducing effects even after imputation of the potential home earnings of migrants . Wouterse (2009) used data from four villages in Burkina Faso to compare the marginal effects of remittances from intercontinental and intra-African migration on inequality, poverty, and social welfare and found that intra-African remittances reduce inequality while intercontinental remittances have the opposite effect. In the same vein, Gubert, et al. (2009), using 2006 households survey in Mali, showed that remittances reduce poverty rates by 11 percent and income inequality by about 5 percent. Giannetti, et al. (2009) found that in the case of Slovenia where income inequality is on the increase, the inclusion of income from remittances reduced income inequality. However, the magnitude of the reduction of income inequality is very small, possibly because of the low share of recipient households. Brempong (2011), analyzed that remittances, consumption, and investment in Ghana affects the marginal spending behavior of households on a broad range of consumption and investment goods including food, education and housing. In another paper

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titled "remittances and poverty in Ghana", he investigated the effects of international remittances on poverty incidence and severity in Ghana. He found that international remittances decrease the probability of a family being poor or chronically poor. Osamwonyi and Obomeile (2015) examined the determinants of income inequality in Nigeria from 1980 to 2012 using the Ordinary Least Square regression method. The findings revealed that migrants' remittances have a positive significant impact on income inequality in Nigeria. Obomeile and Musa (2023) empirically investigated the impact of diaspora remittances on the growth of Nigerian economy over the period of 1990 to 2022. Using the ordinary least square (OLS) regression method, the result showed that diaspora remittance exert a positive and significant impact on the growth of Nigerian economy.

**Methodology**

The research design adopted for this study is the analytical/causal research design. The study covered Nigeria and data spanning from the year 1990-2022 which is a period of thirty-three (33) years were used. The data used were sourced from Central Bank of Nigeria (CBN) statistical bulletin, Nigeria statistical fact sheets on economic and social development, World Bank database and other relevant literatures materials. The Error Correction method (ECM) was employed in analysing the data. The statistical analysis package used for this study is the E-Views 9.0. Based on the theoretical and empirical consideration as well as data availability, the model Osamwonyi and Obomeile (2015) who have investigated the linkage between inequality in income distribution and its determinants was adopted and modified. The functional relationship between the dependent variable and its associated independent variables can be expressed in the following form;

GINIC = f( REM, INFL) ……. (1)

Putting the foregoing functional relationship in a linear econometrics form, we have;

$GINIC_t = \alpha_0 + \alpha_1 REM_t + \alpha_2 INFL_t + \varepsilon_t$ …… (2)

Where;

$GINIC_t$ = Gini Coefficient (proxy for income inequality)

$INFL_t$ = Inflation rate

$\varepsilon_t$ = Error Term

- **Apriori Expectation**

The Gini coefficient of income distribution (GINIC) is expected to have an inverse relationship with migrants' remittances (REM), i.e. $\alpha_2$, <0.

**Results and Interpretation**

**Table 1: Correlation Matrix Result**

| Variables | GINIC | REM | INFRT |
|---|---|---|---|
| GINIC | 1.000 | | |
| REM | 0.478 | 1.000 | |
| INFRT | 0.295 | -0.226 | 1.000 |

**Source:** Authors' Computation (2024)

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The table above shows how the variables relate to one another in the sample period from 1990-2022. The table reveals that the coefficient of correlation of the variable with respect to itself is 1.00. This indicates that there exists a perfect correlation between a variable with respect to itself. The result shows that there exist a positive relationship between Gini coefficient (GINIC) and migrants' remittances from abroad (REM) and inflation rate (INFRT) with a coefficient of 0.48 and 0.30 respectively. These signify that the variables are moving together in the same direction and that strong relationship exists between income inequality and the explanatory variables.

**Table 2: Unit Root Test Result.**

| VARIABLES | ADF STATISTIC VALUES | CRITICAL VALUES @5% SIG. LEVEL | ORDER OF INTEGRATION |
|---|---|---|---|
| GEX | 3.99 | -2.99 | I(0) |
| REM | 7.02 | -2.97 | I(0) |
| INFRT | -4.73 | -2.98 | I(1) |

**Source:** Authors' Computation (2024)

The result of the Augmented Dickey-Fuller (ADF) unit root test shows that government expenditure and migrants' remittances were stationary at levels since their absolute ADF statistics values of 3.99 and 7.02 are greater than the absolute critical ADF values of -2.99 and -2.97 at 5% level of significance respectively. Thus, they are said to be integrated at order zero, /(0). While inflation rate was non-stationary at levels since its absolute ADF statistics value was less than its absolute critical ADF value at 5% level of significance. After the first difference, it was found that the variables that inflation rate became stationary. Thus, the variable was integrated at order one, /(1).

**Table 3: Error Correction Model (ECM) Result.**

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| | | | | |
| C | 4.121535 | 1.180824 | 3.490390 | 0.0030 |
| DREM | 0.002304 | 0.000950 | 2.424501 | 0.0275 |
| DREM(-1) | -0.003865 | 0.001354 | -2.853585 | 0.0115 |
| DINFRT | 0.008932 | 0.043115 | 0.207167 | 0.8385 |
| DINFRT(-1) | -0.010277 | 0.044132 | -0.232872 | 0.8188 |
| ECM(-1) | -0.486770 | 0.061742 | -1.405354 | 0.1790 |
| | | | | |
| R-squared | 0.689048 | Mean dependent var | | 0.546667 |
| Adjusted R-squared | 0.436399 | S.D. dependent var | | 4.980634 |
| S.E. of regression | 3.739130 | Akaike info criterion | | 5.780308 |
| Sum squared resid | 223.6975 | Schwarz criterion | | 6.434200 |
| Log likelihood | -72.70462 | Hannan-Quinn criter. | | 5.989494 |
| F-statistic | 2.727293 | Durbin-Watson stat | | 2.579047 |

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| | | | | |
|---|---|---|---|---|
| Prob(F-statistic) | 0.030058 | | | |

**Source**: Author' Computation (2024)

Table 3 above shows the result of the error correction model of the dependent and independent variables. The result reveals that about 69% of the systematic variations in income inequality is explained by the independent variables as indicated by the coefficient of determination ($R^2$). While about 31% is captured by the error term. On the basis of the overall significance of the model as showed by the F-statistics, it was observed that the overall model was significant since the calculated F-value of 2.73 is greater than the critical F-value at 5% level of significance. Thus, the hypothesis of a significant linear relationship between income inequality and the explanatory variables is validated.

On the basis of the individual statistical significance of the model as shown by the t-values, the result shows that in the short run, migrants' remittances from abroad (DREM) has a significant positive impact on income inequality since the t-value of 2.42 is greater than the critical t-value at 5% level of significance. The result also shows that previous year remittances [DREM(-1)] has a significant negative impact on income inequality with the t-value of -2.85. The result reveals that inflation rate (DINFRT), previous year inflation rate [DINFRT(-1)] have no significant impact on income inequality in Nigeria in the short run since their calculated t-values of 0.21 and -0.23 respectively are less than the critical t-value at 5% level of significance. The coefficient of ECM, with a value of 0.49 signifies that the speed of adjustment is about 49%, which indicates that the speed of adjustment to the long run when there is a temporary disequilibrium would be relatively high. The Durbin Watson statistics of 2.05 indicates the absence of autocorrelation in the model.

## Findings

The study empirically examined the relationship between migrants' remittances and income inequality in Nigeria from 1990 -2022. To ascertain this relationship, an econometrics model was specified wherein the gini coefficient was used as the dependent variable, while migrants' remittances and inflation rate were used as the independent variables. The data collected were analysed using error correction method (ECM) and the result revealed that migrants' remittances have a positive and significant relationship on income inequality in Nigeria during the period under investigation, while inflation rate has a negative and non-significant relationship with income inequality in Nigeria.

## Recommendations

Based on the above findings, the following recommendations were made;

Government should put in place policies that maximize the benefits of migrants' remittances and maximize their positive effects in Nigeria.
Complementary policies that help mitigate any adverse income distribution consequences of migrants' remittances should be designed. Such mitigating polices may range from setting up or improving safety nets, better labour policies and institutions.

Since inflation may have an equalizing impact on distribution of income through a progressive tax system which pushes higher wage earners into higher tax bracket, government should try as much as possible to ensure that tax system in Nigeria is progressive rather than be regressive.

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