THE IMPACT OF REAL INTEREST RATE ON INCOME INEQUALITY: EVIDENCE FROM NIGERIA

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Abstract

The study investigates the impact of real interest rates on income inequality in Nigeria from 1995 to 2022. This study adopts ARDL regression analysis to investigate the impact of real interest rates on income inequality in Nigeria. The study finds that the real interest rate has a strong significant negative impact on income inequality while per capita GDP and unemployment rate have no impact on income inequality in Nigeria. The study also reveals that there is no existing long-run relationship between real interest rates and income inequality in Nigeria. The study recommends that policymakers should design a policy that will lower the real interest rate which leads to higher income which benefits the poor and a reduction in income inequality.

Keywords: Real interest rate, Income inequality, Unemployment rate, Per capita GDP, Interest rate

Jel Classification Code: E52, C50, C82, E43

1.0 Introduction

Income inequality has been among the attractive subjects of economic literature. It arises when there exists an unequal distribution of income, wealth and assets within the society. The unequal distribution of income, generally, leads to the division of society as the lower-income groups of society suffer from this division while the upper-income groups reap the benefits. It varies between societies and different periods of economic systems.

Income inequality refers to the extent to which income is distributed unevenly among a population. Income is not just the money received through payment, but all the money received from employment (wages, salaries, bonuses etc.), investments such as interest on savings accounts and dividends from shares of stock, savings, state benefits, pensions (state, personal, company) and rent. When the overall state of income inequality in the world is considered, it has been recorded that relative global income inequality declined in the past 4 years from a relative Gini coefficient of 42.7 in 2019 to 35.1 in 2022, as it is

driven by the extraordinary economic growth in the countries like Nigeria (UNDP, 2024). However, for absolute income inequality, the Gini index has increased from 34.4 to 41.5 between 2019 and 2022. Also, in Africa, the ones who reap the benefits of economic growth are mainly the wealthiest as UNDP (2024) report claims that 46% of the total increase in income between 1988 and 2011 went to the wealthiest 10%. Even worse, 50% of the increase in the world's wealth went to the wealthiest 1%, as the poorest 50 % received only 1% of the increase. From 2000 to 2010, the wealthiest 1% increased their wealth from 32% to 46% as the world wealth has become more concentrated in African countries. In general, it can be said that the world income and wealth inequality have increased over few decades (UNDP, 2024).

Liosi and Spyrou (2022) claim that real interest rate as monetary policy tools tends to increase income inequality depending on the regions. This is because each region or economy has its structural changes. For instance, in some economies like Ireland, Germany and the Netherlands, monetary policy has little or no impact on income inequality, while for Spain, Portugal, Greece and Italy, the impact is more pronounced (Liosi & Spyrou, 2022). More recently, there is a clear indication that monetary policy affects employment rates, incomes, and asset prices. Because different households hold different financial assets, work in different sectors, and are differentially attached to the labour force, it follows that monetary policy will almost certainly have heterogeneous effects across households. Thus, monetary policy affects categories of individuals differently (Alisdair & Christian, 2023).

Oxfam (2022) sees that the level of income inequality is increasing in many countries in Africa, and there is a widening gap between the rich and the poor due to the level of economic inequality in Nigeria which has reached a high level, this reflects the daily struggle of the majority of the population against the huge wealth amassed by a minority over 112 million people in 2010 living in poverty. According to a report by the National Bureau of Statistics (2020), this number will increase to 133 million Nigerians by 2022. However, the effect of real interest rate as monetary policy tools on income inequality has not been proven with empirical data. Therefore, the government's attempt to reduce the gap between the rich and the poor failed due to the monetary policies, especially the real interest rate tools (Samuel, 2016).

According to Nigeria Policy Rate (NPR, 2024), from the 1980s onwards in particular, income inequality has attracted a great deal of attention as a major problem and empirical works have been conducted to address this issue. For instance, in 2006 in Nigeria, as real interest rates approximated 12%, income inequality got worse in the economy.

Having identified inequality as an economic problem in Nigeria, research has provided ample evidence of the role of real interest rates on inequality and to understand it, it only requires voluntary help to resolve the contradiction. The objectives of the study are to examine the impact of real interest rate on income inequality in Nigeria and to determine the existence of long-run relationship between the real interest rate and income inequality in Nigeria.

2.0 Review of Relevant Literature

2.1 Conceptual Review

Income Inequality

Ordinarily, the income inequality can simply be referred to as the income gap between the rich and the poor. Relative income inequality indicates the proportional inequality level, while absolute inequality shows the exact level, though, the measurement of inequality is another important issue associated with the concept of inequality (Todaro & Smith, 2003).

Ogbeide and Agu (2015) define income inequality as the inequitable distribution of income among the members of a particular group, an economy or society. Income inequality can generally be measured using the Lorenz curve, the Gini coefficient and the general entropy class. The Gini coefficient is the most frequently used to measure income inequality. Furthermore, concerning the International Monetary Fund (IMF)'s publication, inequality can be viewed from different perspectives, all of which are related. The most common metric is income inequality which refers to the extent to which income is evenly distributed within a population.

Real Interest Rate

Thomas (2023) defines real interest rate is the rate of interest an investor, saver or lender receives or expect to receive after allowing or adjusting inflation. It can also the interest rate that has been adjusted for inflation and it is the actual amount of money a borrower pays or an investor receives. Real interest rate is described as the lending interest rate adjusted for inflation. Doerr et al. (2020) see real interest rate as monetary policy tools used by a nation's central bank to control the overall money supply and promote economic growth and employ strategies such as revising interest rates and changing bank reserve requirements. In addition, monetary policies are seen as either expansionary or contractionary depending on the level of growth or stagnation within the economy. The central banks have four main monetary policy tools: the reserve requirement, open market operations, the discount rate and interest rates.

2.2 Theoretical Review

Interactionism perspective on inequality theory

George (1930), in sociology, interactionism is a theoretical perspective that understands social processes (such as conflict, cooperation, identity formation) as emerging from human interaction. Scholars of this perspective study how individuals act within a society and believe that meaning is produced through the interactions of individuals. According to integrationists, gender stratification exists because people act toward each other based on the meanings they have for one another. Integrationists believe that these meanings are derived through social interaction and that these meanings are managed and transformed through an interpretive process that people use to make sense of, and handle, the objects that constitute their social worlds. Social interaction is a face-to-face process that consists of actions, reactions, and mutual adaptation between two or more individuals. The goal of social interaction is to communicate with others. Social interaction includes all languages

including body language and mannerisms. Erving Goffman, one of the forefathers of this theoretical perspective emphasizes the importance of control in social interactions.

Labour Market Institutions Theory

Woodbury (1987), states the three different types of institutions that have to be taken into account, as key determinants of income inequality and its dynamics. Firstly, the range of labour contracts and the laws which regulate them affect the bargaining power of workers. The easier the activation of individual fixed-term labour contracts the weaker the bargaining power of workers. Secondly, the degree of unionisation of the workforce matters. Thirdly, the existence and the degree of coverage of collective bargaining have an effect. The role and the evolution of these three factors have deeply influenced the dynamics of income inequality changing the balance of power in the process of wage bargaining. Without going into detail, the deregulation of the labour market of these last years has weakened collective bargaining in favour of a vis-à-vis contracting between the employer and the employee. This has been probably one of the crucial explanatory factors in the increase in inequality experienced in most European countries in these last years in the Organization for Economic Cooperation and Development (OECD, 2012).

2.3 Empirical Review

Lenza and Slacalek (2024) investigated how monetary policy affects income and wealth inequality in the Euro. The study employs the Bayesian VAR model. The study reveals that the monetary policy has negative effect on income inequality through the quantitative easing in the euro area which in turn affect individual households via the portfolio composition. The study concludes that monetary policy has a negative significant impact on income inequality in Euro.

Beqiraj et al. (2024) examined the effect of monetary policy on wage inequality in Italy. The study employs the Smooth Local Projection (SLP) method. The study finds that expansionary monetary policy significantly reduces wage inequality while stimulating economic activity. Also, by distinguishing workers' subgroups according to sector of activity, occupation and firm size, we find that expansionary monetary policy decreases wage inequality both 'between' and 'within' subgroups.

Guillermo (2023) examined the effect of increase in the interest rate on income inequality in Euro countries. The study employs the panel method of analysis. The study reveals that during the COVID period, an increase in interest rates has led to an improvement in income Inequality in Euro countries. The study concludes that an increase in the interest rate has a significant effect on income inequality in Euro countries.

Zulfiqar and Muhammad (2023) examined the effect of monetary policy instruments on income inequality in Asian and African developing economies. The study employs pooled mean group (PMG) and panel autoregressive distributed lag (ARDL). The study reveals that money supply has a negative effect and inflation has a positive and significant influence on income inequality. It also finds that GDP per capita income and inward foreign direct investment (FDI) have a negative impact on inequality. The study concludes that monetary policy has a negative and significant influence on income inequality.

Liu (2023) examined the impact of monetary policy on income and wealth equality. The study employs survey research. The study finds that accommodative monetary policy reduces the debt burden of households, reduces the downward pressure on the economy, and thus promotes wealth equality. Also, expansionary monetary policy widens income inequality through the asset mix channel.

Adelia et al. (2022) examined the response of income inequality to monetary policy shock in Indonesia. A Vecm Approach. The study employs a Vector Error Correction Model (VECM) research test to analyze the existence of a long-term and short-term relationship between the independent variable and the dependent variable in time series data. The study shows that only interest rates were proven to have a significant long-term relationship with other variables, while no short-term relationship was found between the variables studied. It also shows that there is no significant causal relationship between the Gini Ratio and Interest Rates, Money Supply, Exchange Rates, and Inflation. The study was limited to the uses of the Vector Error Correction Model (VECM).

Raczyński (2022) investigated the relationship between monetary policy and economic inequality. The study employs the DSGE model. The study finds that the labour market determines the distributional effects of policy easing. Monetary policy boosts asset prices significantly, the unemployment-to-employment flow mitigates not only the impact of higher asset prices on inequality but also outweighs it.

Muhammed and Mantu (2022) examined the impact of real interest rates on income inequality in India. The study employs ARDL bounds test for validating the long-run relationship over the annual data period 1995 to 2019. The study finds the long-run relationship between real interest rates and income inequality. The study reveals that initial increase in interest rates significantly reduces income inequality. But in a later stage, a threshold exists for such an increased interest rate to revert the prior beneficial impact. It also finds that economic growth significantly reduces income inequality whereas trade openness promotes it. Surprisingly, technological innovation enhances income inequality but, this effect vanishes in the long run.

Mimir et al. (2021) analysed the impact of monetary policy on income and wealth inequalities in Norway. The study employs a large-scale DSGE model. The study finds that monetary policy has a significant impact on the labour market and asset prices, income and wealth. The study concludes that a positive monetary policy shock (policy easing) reduces income inequality.

Adeleye (2020) investigated the impact of Unbundling interest rates and bank credit nexus on income inequality in Nigeria. The study employs an autoregressive distributed lag-error correction model approach. The study finds that the moderating effect of real interest rate with bank credit indirect relationship to income inequality and bank credit has an equalizing impact on income inequality when the model is augmented for a structural break. The study reveals that 1% point increase in the real lending interest rate is associated with a 0.45% decline in the volume of bank credit and a reduced the level of income inequality.

Kulp (2020) examined the effects of monetary policy on income inequality in Germany. The study employs autoregressive distributed lag (ADL) model. The study reveals that

expansionary conventional monetary policy reduced the policy rate set by the central bank and inequality-decreased. Also, unconventional monetary policy measures have a positive significant effect on the income inequality in Germany from 1991 to 2018.

Doerr et al. (2020) conducted an investigation on the relationship between interest rate and inequality in US. The study uses time series data to capture the relationship between interest rate and inequality. The study employs multi variate regression method. The study finds that interest is highly significant in the short-run but the long-run effect tends toward zero.

Eunseong (2019) conducted a research on the effect of monetary policy on income inequality. The study employs a quantitative heterogeneous agent New Keynesian economy. The study finds that that monetary policy shocks have distributional consequences due to substantial heterogeneity in labour supply elasticity across households. Also reveals that a more equal economy is associated with more effective monetary policy in terms of output since it generates a larger aggregate elasticity of labor supply.

Muhammet (2019) investigated the effect of real interest rates on income inequality. The study employs panel data techniques. The study finds that the real interest rate has no significant effect on the income distribution variables. It also reveals that moderating effect of human capital and real interest rate variables has a significant effect on income distribution. The study concludes that an increase in human capital has a significant effect on income distribution. It also concludes that an increase in the real interest rate disrupts income equality.

Lancastre (2016) investigated the relationship between income inequality and real interest rates, the marginal borrowing and the heterogeneous population's lifelong income by the ratio of savings. The study employs ARDL statistical analysis to demonstrate how growing income inequality reduces the real interest rate feature as the borrowing ratio of the wealthy is lower than the ratio of the poor. The study finds that the savings for future generations inherently increase along with lifelong income and promote the expansion of savings through a channel of heirs which eventually leads to greater inequality, it also notes that the marginal saving ratio of the wealthier is higher compared to the savings ratio of the poorer.

3.0 Methodology

3.1 Theoretical Framework

The theoretical framework of this study is based on the theory of Labour market institutions by Woodbury (1987), which establishes three different types of institutions that need to be considered as the key determinants of income inequality and its dynamics. Firstly, the range of labour contracts and the laws which regulate them affect the bargaining power of workers. The easier the activation of individual fixed-term labour contracts the weaker the bargaining power of workers. Secondly, the degree of unionisation of the workforce matters. Thirdly, the existence and the degree of coverage of collective bargaining have an effect. The role and the evolution of these three factors

have deeply influenced the dynamics of income inequality, thus changing the balance of power in the process of wage bargaining.

3.2 Model Specification

This section specifies all the models in line with the objectives of the study (maintained hypothesis) in explicit stochastic equation form together with the *a priori* theoretical expectations about the signs and size of the parameters of the function. This study uses a four-variable regression model (that is, multiple regression- one dependent, three explanatory variables. Income inequality is used as the dependent variable, while real interest rate, per capita GDP and unemployment rate are used as independent variables. The study adopts Doerr et al. (2020) model for the real interest rate on income inequality in Nigeria could be stated as follows: In this study therefore, we specify a functional form of the model as follows:

$$INE = f(RIR, PCGDP, UMR) \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots 1$$

The mathematical expression is as follows:

$$INE = \beta 0 + \beta 1\ RIRt + \beta 2\ PCGDPt + \beta 3\ UMR \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots 2$$

The econometric form of the model can further be stated as;

$$INE = \beta 0 + \beta 1\ RIRt + \beta 2\ PCGDPt + \beta 3\ UMR + \mu t \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots 3$$

Where;

INE = Inequality (proxy by Gini coefficient)

RIR= real interest rate

PCGDP= per capita gross domestic product

UMR= unemployment rate

μ = Stochastic error term

β1, β2 and β3 are the parameters for measuring income inequality

Data Sources, Description and Measurement

This study makes use of time series secondary data covering a period of 1995-2022. Below is the summary of the data source, measurement and apriori expectations.

Gini Coefficient: Described as a statistical measure of economic income inequality in a population and measured in annual percentage. Data sourced from the World Development Indicator (WDI) and expected to have a positive effect.

Real interest rate: Described as the lending interest rate adjusted for inflation and measured in annual percentage. Data sourced from the International Monetary Fund (IMF) and expected to have a negative effect.

Per capita GDP: described as gross domestic product divided by mid-year population and measured in Annual percentage. Data sourced from the World Development Indicator (WDI) and expected to have a negative effect.

Unemployment rate: Described as the number of unemployed persons as a percentage of the labour force and measured in Annual percentage. Data sourced from the World Development Indicator (WDI) and expected to have a negative effect.

4.0 Research Findings/Result

4.1 Descriptive Statistics Analysis

The table below shows the results of descriptive statistics for each of the variables employed in the study. These statistical results are the mean, median, maximum, minimum, and standard deviation, for all the variables. The descriptive analysis is presented to give an overview and summary of the variables.

Table 1: Descriptive Statistics Analysis Test

Variable	Obs	Mean	Std. Dev.	Min	Max
INE	28	268.229	177.76	33.5	533.5
RIR	28	4.951	9.02	-31.45	18.18
PCGDP	28	1.893	3.432	-4.2	12.3
UMR	28	4.11	.577	3.51	5.63

Explanatory Note: INE= income inequality, RIR=Real interest rate, PCGDP= Per capita Gross Domestic Product, UMR= Unemployment rate

Source: *Author's Computation (2024)*

The results from Table 1 show that the mean and standard deviation of income inequality (INE) was 268.229 and 177.76 per cent respectively, with a minimum value of 33.5 per cent, which occurred in 1995, and a maximum value of 533.5, which occurred in 2014. In the case of real interest rate (RIR), the mean and standard deviation were 4.951 and 9.02 per cent respectively, with a minimum value of -31.45 per cent, which occurred in 1995, and a maximum value was 18.18 per cent, which occurred in 2009. Per capita GDP (PCGDP) mean and standard deviation were 1.893 and 3.432 per cent respectively, with a minimum value of -4.2 per cent, which occurred in 2020, and a maximum value was 12.3, which occurred in 2002. The unemployment rate (UMR) mean and standard deviation were 4.11 and 0.577 per cent respectively, with a minimum value of 3.51 per cent, which occurred in 2004, and a maximum value was 5.63, which occurred in 2020.

4. 2 Unit root /Stationary test

As Engle and Granger (1987) argued, if individual time series data are non-stationary, their linear combinations could be stationary if the variables were integrated in the same order. The assumption is stated as follows: If the absolute value of the Augmented Dickey-Fuller (ADF) test is greater than the critical value either at 1%, 5%, or 10% level of significance at order zero, one or two, it shows that the variable under consideration is stationary, otherwise it is not. The results of the Augmented Dickey-Fuller (ADF) test obtained are as follows:

Table 2: Augmented Dickey-Fuller Unit Root Test

Variables	Level	1st diff	Probability	Integration order
INE	-	-3.228	0.0590	I (1)
RIR	-6.922	-	0.0000	I (0)
PCGDP	-2.997	-	0.0352	I (0)
UMR	-4.012	-	0.0085	I (0)

Explanatory Note: INE= income inequality, RIR=Real interest rate, PCGDP= Per capita Gross Domestic Product, UMR= Unemployment rate

Source: *Author's Computation (2024)*

Table 2 above, the estimated result of the stationary test using ADF approach. The ADF estimates of -6.922, -2.997 and -4.012 for real interest rate, per capita GDP and the unemployment rate at the level are stationary at 1% and 5% significant lev7el respectively. The ADF estimates of -3.228 for income inequality at first difference are significant at 5%, 1%, 5% and 1% respectively.

From the above result, real interest rate, per capita GDP and unemployment rate are integrated at order zero, while the Gini coefficient is integrated at order one which provides evidence for the adoption of the ARDL model (Pesaran et al., 2001).

4.3 Correlation Analysis

In the correlation test, we test the variables to ascertain the degree of relationship that exists between the independent variables and the dependent variable relationships among the studied variables depicted in the model were tested using a correlation matrix and the result is presented below:

Table 3: Correlation Analysis Test

Variables	(1) INE	(2) RIR	(3) PCGDP	(4) UMR
(1) GINCOEF	1.000			
(2) RIR	0.273	1.000		
	(0.160)			
(3) PCGDP	-0.236	0.261	1.000	
	(0.226)	(0.179)		
(4) UMR	0.384	-0.125	-0.662	1.000
	(0.043)	(0.525)	(0.000)	

Explanatory Note: INE*= income inequality, RIR=Real interest rate, PCGDP= Per capita Gross Domestic Product, UMR= Unemployment rate*

Source: *Author's Computation* (2024)

Moving to the first column of Table 3, it can be seen that INE is positively correlated with UMR; and uncorrelated with RIR, and PCGDP variables in Table 3. In the second column and second row of Table 3, it can be seen that RIR is uncorrelated with INE PCGDP, and UMR, in Table 3. Moving further to the third column and third row of

Table 3, it can be seen that PCGDP is negatively correlated with UMR; and uncorrelated with INE, and RIR in Table 3 Moving forward to the fourth column and fourth row of Table 3, it can be observed that UMR is positively correlated with INE; negatively correlated with PCGDP; and uncorrelated with RIR in Table 3.

Table 4: The ARDL Bounds Test Results

Models	F-stat	Upper and lower Bounds at 5% Significance Level	Remarks
$INE = f(RIR, PCGDP, UMR)$	1.985	$I_{O = 3.41}$ $I_{1= 4.68}$	Co-integrated

Explanatory Note: INE= income inequality, RIR=Real interest rate, PCGDP= Per capita Gross Domestic Product, UMR= Unemployment rate

Source: *Author's Computation (2024)*

As shown in Table 4, in the Model, the F-statistics value is below both upper and lower bound critical values at 5% significance levels so the model is not cointegrated. This implies that the variables featured in the models are not co-integrated, hence, there is no long-run relationship between the dependent variable and its regressors, so short-run estimates are applicable. Therefore, short-run estimates are reckoned with and reported in the study while the long-run ones are not.

Table 5: Short-Run ARDL Estimate of Income Inequality Equation

Variables	Model			
	Coeff	Std. Err	t-stat	P-value
RIR	-2.14	0.981	-2.18	0.047
PCGDP	1.89	0.145	1.65	0.122
UMR	14.48	15.40	0.94	0.364
R^2	0.4053	-	-	-
Adjusted R^2	0.2161	-	-	-
F-statistic	1.985	-	-	0.000
VIF Test statistic for multicollinearity	4.21	-		
Breusch-Godfrey LM Test statistic for Autocorrelation	7.578	-	-	0.0556
Breusch-Pagan-Godfrey Test statistic for Heteroscedasticity.	25.00	-	-	0.4058
Jarque-Bera Test Statistic for Normality	0.435	-	-	0.045

Explanatory Note: RIR=Real interest rate, PCGDP= Per capita Gross Domestic Product, UMR= Unemployment rate

Source: *Author's Computation* (2024)

5. Discussion of Results and Implication of Findings

From Table 4, the R-squared value for the Model is 0.4053, indicating the percentage of variations in the dependent variable that the explanatory variables have explained. The F-statistics for the model is 1.985, with the corresponding p-value of 0.000. This indicates that the R^2 values are statistically significant and that the model has a good fit.

For heteroscedasticity, if the p-value of the Chi-squared statistic generated by the test is less than the 0.05 cut-off adopted in the study, the null hypothesis of no heteroscedasticity is to be rejected and it is to be concluded that there is heteroscedasticity, while the converse will be the case if the p-value equals or exceeds 0.05. As can be seen in Table 4, the F-statistics is 25.00, with their corresponding p-values of 0.4058. The result above indicates that the model suffers from the problem of heteroscedasticity or unequal variance of the error term.

The Breuch-Pagan-Godfrey test methodology is carried out to test the existence of the autocorrelation problem. State that, if the p-value of the F-statistics is lower than the 5% cut-off adopted in the study, then, the null hypothesis of no serial correlation is to be rejected and it is to be concluded that serial correlation is present, while the opposite will be the case if the p-value equals or exceeds 0.05. As revealed in Tables, the F-statistics is 7.578, with corresponding p-values of 0.0556. This implies that the models suffer from the problem of serial correlation.

The normality test states that, if the Jarque-Bera (JB) test statistic is less than or equal to the chosen cut-off significance level (which is taken to be 5% in the present study, in common with many of the existing studies), it means the null hypothesis of the existence of normality will be rejected and it will be concluded that the error term is not normally distributed. The converse will be the case if the JB statistic's p-value exceeds the chosen 5% cut-off. As shown in Tables, the generated JB statistics for the Model is 0.435, with corresponding p-values of 0.045. This implies that the model has a problem of non-normality in the distribution of the residuals. A value of VIF that is less than 10 is considered necessary for there to be an absence of a severe problem of multicollinearity in a model. In this study and as reported in Table 4, the computed variance inflation factor (VIF) statistics have values of 4.21. Since there is no VIF value for any of the models that are up to or even close to 10, it can be concluded that each of the nine models is free from a serious multicollinearity problem.

From Table 4, the coefficient of RIR is -2.14, with corresponding p-values of 0.047. This implies that the real interest rate is a statistically significant negative coefficient. The finding that RIR has a negative effect on income inequality is tallying with the submission of Muhammed and Mantu (2022). From Table 4, the coefficient of PCGDP is 1.89, with corresponding p-values of 0.122. This implies that per capita GDP is a statistically insignificant positive coefficient. The finding that PCGDP does not affect income inequality is tallied with the submission of & Muhammad (2023). The coefficient of UMR is 14.48, with corresponding p-values of 0.364. This implies that the unemployment rate is a statistically insignificant positive coefficient.

6. Conclusion and Recommendations

Based on the above findings, the study concludes that Real interest rate (RIR) has a negative effect on income inequality given the findings noted above that its coefficients are negative and statistically significant in income inequality and there is no long-run relationship between real interest rate and income inequality. Per capita GDP (PCGDP) does not affect income inequality given the finding summarized in the section above that its coefficients are positive and statistically insignificant in income inequality. The unemployment rate (UMR), does not affect income inequality given the findings summarized in the section above that its coefficients are positive and statistically insignificant in the income inequality. Based on the findings and conclusions highlighted above, the following recommendations are made: the study recommends that the policymakers should design a policy that will lower the real interest rate that leads to higher income which benefits the poor. Also leads to a reduction in income inequality.

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