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Labour Productivity as a Mediating Channel in the Inflation, Savings, Growth Nexus: Evidence from Nigeria

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Abstract
This study investigates labour productivity as a mediating channel in the complex relationship between inflation, savings, and economic growth in Nigeria from 1981 to 2024. While conventional growth theories posit a positive link between savings, capital formation, and output, Nigeria's persistent experience of 'jobless growth' and macroeconomic instability presents a critical paradox. The analysis employs an Autoregressive Distributed Lag (ARDL) bounds testing approach to examine both short-run dynamics and long-run cointegrating relationships. The empirical findings reveal a significant and persistent negative effect of inflation on growth in both time horizons. Crucially, while savings exhibit a positive but insignificant short-run impact, the long-run relationship becomes negative and statistically significant—a counterintuitive result that challenges orthodox models. This outcome is interpreted through the conceptual lens of the Rentier-State Human Capital Trap, which posits that in Nigeria's oil-dependent, enclave-led economy, savings are inefficiently intermediated and often diverted into unproductive or speculative ventures rather than investments that enhance broad-based labour productivity. Consequently, the mediating channel of labour productivity is structurally constrained. The study concludes that policy interventions focused solely on price stability or savings mobilization will remain insufficient unless they are integrated with structural reforms designed to break the rentier-state logic, redirect capital towards productivity-enhancing sectors, and create a domestic demand for skills, thereby activating labour productivity as a true engine of sustainable and inclusive growth.

Keywords: *Labour Productivity, Inflation, Savings, Economic Growth, Rentier-State, Nigeria.*

1. Introduction

Economic growth remains a paramount objective for Nigeria, Africa's largest economy by GDP and most populous nation (World Bank, 2023). However, Nigeria's growth trajectory has been characterized by volatility, inconsistency, and a failure to translate macroeconomic expansion into broad-based prosperity or significant employment generation—a phenomenon widely described as 'jobless growth' (Olaniyi et al., 2021; World Bank, 2024). Underpinning this paradox are persistent macroeconomic imbalances, notably high inflation and chronically low domestic savings, which have constrained sustainable development. Nigeria's inflation

rate, driven by structural supply shocks, exchange rate volatility, and monetary expansion, soared to 21.9% in 2024, severely eroding purchasing power and distorting economic decision-making (National Bureau of Statistics [NBS], 2024). Concurrently, gross domestic savings have stagnated around 13.1% of GDP, far below the sub-Saharan African average, limiting the pool of investable capital necessary for financing infrastructure and productive sectors (Central Bank of Nigeria , 2024; International Monetary Fund (IMF, 2024).

The traditional nexus between inflation, savings, and economic growth has been extensively studied, yet with inconclusive and context-specific outcomes. Classical and Keynesian theories posit different relationships: while moderate inflation may stimulate demand and investment in the short run, sustained high inflation is widely documented to discourage savings, increase uncertainty, and ultimately stifle growth (Khan & Senhadji, 2001; Blanchard, 2021). In Nigeria, empirical evidence suggests a threshold beyond which inflation exerts significant negative effects on growth (Egbetunde & Akinlo, 2020). Similarly, the Harrod-Domar and Solow growth models emphasize savings as a critical driver of capital accumulation and long-term growth (Todaro & Smith, 2020). However, Nigeria's experience reveals a disconnect, where neither controlling inflation nor marginal increases in savings rates have robustly catalyzed sustained and inclusive economic expansion (Adeoye & Saibu, 2018; Okonkwo et al., 2021).

A critical gap in understanding this tripartite relationship in Nigeria is the often-overlooked role of labour productivity. Productivity—the efficiency with which labour converts inputs into outputs—serves as a fundamental channel through which macroeconomic variables influence long-term growth. Inflation can directly undermine labour productivity by increasing production costs, creating operational uncertainties, and discouraging long-term skill investments (Adenikinju, 2019). Conversely, savings, when effectively intermediated into productive investments in technology, infrastructure, and human capital, can enhance productivity (Solow, 2021). Yet, in Nigeria's rentier-state context, fiscal disarticulation and enclave-led growth in capital-intensive sectors like oil and gas have historically weakened the link between savings, investment, and broad-based productivity gains (Ajakaiye et al., 2023; World Bank, 2024). This has resulted in a scenario where economic growth does not generate commensurate productive employment, trapping human capital in low-productivity informal sectors (International Labour Organization (ILO, 2024).

Furthermore, the phenomenon of skilled labour emigration, popularly termed "Japa," underscores a critical dimension of this productivity trap. As domestic opportunities stagnate, the outmigration of skilled labour—sometimes formalized through policies like the National Talent Export Programme (NATEP)—externalizes the returns on human capital investment, further depleting the domestic productivity base (Liu, 2023; Okere, 2023). This dynamic reinforces the rentier growth model, where growth is decoupled from inclusive productivity enhancement.

Therefore, this study posits that analysing the inflation-savings-growth nexus without accounting for the mediating role of labour productivity provides an incomplete picture of Nigeria's growth constraints. It argues that the effectiveness of policies targeting inflation control and savings mobilization is contingent on their ability to positively influence labour productivity. This research seeks to address this gap by investigating Labour Productivity as a Mediating Channel in the Inflation, Savings, and Economic Growth Nexus in Nigeria**.**

The study is guided by the following objectives:

(1) To analyse the direct effects of inflation and savings on economic growth in Nigeria;

(2) To examine the impact of inflation and savings on labour productivity; and

(3) To assess the mediating role of labour productivity in the relationship between inflation, savings, and economic growth.

By employing time-series econometric techniques on data from 1990 to 2024, this research aims to provide empirical evidence that can inform more nuanced and effective macroeconomic and structural policies. The findings are expected to contribute to the design of integrated policy frameworks that not only aim for price stability and capital accumulation but also deliberately foster the productivity gains necessary for sustainable, inclusive, and job-creating economic growth in Nigeria.

2. Methodology

This study employs an Autoregressive Distributed Lag (ARDL) modeling approach to analyze the relationship between inflation, savings, and economic growth in Nigeria from 1981 to 2024. The ARDL framework is particularly suitable for this analysis as it accommodates variables with different orders of integration and provides reliable estimates even with limited data points. The ARDL approach will be complemented with post-estimation diagnostic tests to ensure the robustness of the findings. This methodology allows for the examination of both short-run dynamics and long-run equilibrium relationships among the variables.

$$\Delta GDP_t = \alpha_0 + \sum^{p}_{i=1}\beta_i \Delta GDP_{t-i} + \sum^{q}_{i=0}\gamma_i \Delta Inf_{t-i} + \sum^{z}_{i=0} k_i \Delta Int_{t-i} + \sum \delta_i \Delta Sav_{t-i} + \lambda ECM_{t-1} + \epsilon t$$

Where:

- **GDP**= Economic growth at time *t*
- **Inf** = Inflation rate at time *t*
- **Sav** = Savings rate at time *t*
- **Int** = interest rate at time *t*
- **ECM** = Error Correction Term (measures the speed of adjustment to long-run equilibrium)
- **εt** = Error term

2.1 Conceptual Framework: Jobless Growth and the Rentier-State Human Capital Trap in Nigeria (1980–2024)

Nigeria's development experience since the 1980s presents a persistent paradox: periods of economic growth have not translated into broad-based employment or improved labour market outcomes (Olaniyi et al., 2021). This study conceptualises this paradox as the structural outcome of a rentier-state political economy rather than the failure of isolated macroeconomic or social policies (Arslan, 2011; Matashu & Skhephe, 2022; Sodipe & Ogunrinola, 2011). The phenomenon of jobless growth—sustained output expansion without corresponding employment creation—directly challenges orthodox growth theories that assume a stable and positive relationship between GDP growth and labour absorption (Kumar & Chandel, 2024; Tiendy & Budhidharma, 2025).

In Nigeria, economic growth has been largely concentrated in capital-intensive and extractive sectors with weak domestic linkages, particularly oil and gas, telecommunications, and enclave services (Rodrik, 2016; World Bank, 2023). Consequently, increases in GDP have failed to generate sufficient formal employment, leaving unemployment and underemployment persistently high even during periods of growth. This structural disconnect reflects a broader pattern observed in many resource-rich developing economies, where growth occurs without inclusive labour-market expansion (Nahabwe, 2025).

Existing literature identifies several drivers of jobless growth, including technological advancement, capital deepening, and sectoral shifts toward less labour-intensive production (Kumar & Chandel, 2024; Yağmur, 2025). In Africa, early deindustrialization and the stagnation of manufacturing capacity have further constrained employment creation and intensified skill mismatches (Mohamed, 2025). In Nigeria, oil-driven growth has historically boosted GDP without generating commensurate employment, reinforcing labour market fragility (Ajakaiye et al., 2016; Chigbo et al., 2020). Automation, capital-biased technological adoption, and misalignment between educational outputs and labour market demand have compounded this problem.

These dynamics collectively produce what this study terms the Rentier-State Human Capital Trap, a self-reinforcing structure through which economic growth, fiscal policy, and human capital formation fail to generate sustainable employment outcomes. The trap operates through three interrelated pillars.

2.1.1 Growth–Employment Disconnect (Jobless Growth)

Nigeria's growth trajectory continues to be characterised by enclave-led expansion concentrated in capital-intensive sectors that are weakly integrated into the domestic economy, particularly oil and gas, telecommunications, and extractive services (International Monetary Fund [IMF], 2024; World Bank, 2023). Although GDP growth remains highly sensitive to international oil prices, it has shown limited capacity to generate formal-sector employment. Consequently, more than 80 per cent of Nigeria's labour force remains engaged in informal employment, which is associated with low productivity, income insecurity, and limited social protection (International Labour Organization (ILO, 2024; World Bank, 2023).

Recent empirical evidence indicates that even when employment expands, the quality of jobs created is often insufficient to reduce poverty or improve welfare outcomes (World Bank, 2022). This reflects Nigeria's persistently low employment elasticity of growth, in which output expansion fails to translate into productive, inclusive job creation (Ajakaiye et al., 2023; World Bank, 2024). The coexistence of GDP growth with high unemployment and working poverty underscores the structural disconnect between growth and labour absorption, thereby justifying the use of the unemployment rate (UNEMPLT) as a central outcome variable in the empirical analysis.

2.1.2 Fiscal Disarticulation of the Rentier State

Rentier state theory argues that when government revenue is derived primarily from external rents rather than domestic taxation, the fiscal and social contract between the state and citizens is weakened (Beblawi & Luciani, 1987; Mahdavy, 1970). In Nigeria, oil rents significantly reduce the state's incentives to promote productive employment and broad-based human capital development (Manu et al., 2023).

Public expenditure on education and health has therefore often served redistributive or political purposes rather than functioning as a strategic investment in labour productivity. This fiscal disarticulation helps explain why rising budgetary allocations have not translated into improved labour market outcomes. Large-scale diversification efforts, such as Vision 20:2020, failed to fundamentally alter Nigeria's mono-product economic structure, reinforcing rent dependence and limiting employment creation (Obasaju et al., 2024).

2.1.3 Constrained Domestic Absorption and Formalised Human Capital Export

The Micro, Small, and Medium Enterprise (MSME) sector is widely recognised as Nigeria's most viable domestic pathway out of the rentier trap, accounting for the majority of firms and employment (International Labour Organization [ILO], n.d.). However, persistent constraints—limited access to finance, poor infrastructure, regulatory bottlenecks, and weak institutional support—have prevented the sector from absorbing Nigeria's growing skilled labour force (World Bank, 2025a).

As domestic employment opportunities remain limited, skilled emigration has accelerated, popularly captured in the term "Japa" (Liu, 2023). More recently, the Nigerian government has sought to institutionalise this trend through policies such as the National Talent Export Programme (NATEP), which aims to position Nigeria as a global supplier of skilled labour (Okere, 2023). While this strategy generates foreign exchange, it simultaneously entrenches domestic skill shortages and reinforces the rentier growth model by externalising the returns to human capital investment.

2.2 Theoretical Framework: Conditioning Growth Theory to Nigeria's Structural Context

This study draws on Human Capital Theory (HCT) and Endogenous Growth Theory (EGT), but applies both conditionally within the context of a rent-dependent economy experiencing labour-displacing technological change. The central argument is that the predictive power of orthodox growth theories is contingent on state revenue structures, labour-market absorption capacity, and the sectoral pattern of technological adoption, particularly in resource-rich developing economies (Acemoglu & Restrepo, 2020; Auty, 2002; Becker, 1964; Rodrik, 2016; Romer, 1986; World Bank, 2024).

2.2.1 Human Capital Theory: Investment without Effective Labour Demand

Human Capital Theory posits that investment in education and health enhances productivity, earnings, and long-term growth (Becker, 1964; Schultz, 1961). The theory assumes sustained demand for skilled labour and a fiscal system reliant on citizen productivity (Becker, 1993). In this study, HCT is operationalised using government expenditure on education (GVEDU) and health (GVHLTH).

However, evidence from Nigeria shows weak long-run effects of education expenditure on employment outcomes, consistent with findings from other Sub-Saharan African economies (Ajakaiye et al., 2016; Pritchett, 2001). Rentier state dynamics provide a structural explanation: when state revenue is decoupled from labour productivity, human capital spending becomes politically motivated and weakly linked to productive sector development

(Beblawi & Luciani, 1987). These distortions are intensified by jobless growth and technological change that displaces labour faster than new jobs are created (Somoye, 2024).

2.2.2 Endogenous Growth Theory: Rent Dependence and Innovation Failure

Endogenous Growth Theory emphasises innovation, knowledge accumulation, and human capital spillovers as drivers of sustained growth (Lucas, 1988; Romer, 1986). Nigeria's growth experience—volatile and rent-driven—diverges sharply from this framework. The resource curse literature explains this divergence by showing how natural resource rents crowd out tradable sectors, weaken innovation incentives, and suppress knowledge diffusion (Auty, 2002; Gylfason, 2001; Sachs & Warner, 2001).

In Nigeria, oil revenues have crowded out competitive and innovation-intensive industries, weakening incentives for diversification and technological learning outside the extractive sector (Auty, 2002; Gylfason, 2001; Sachs & Warner, 2001). Technological adoption has therefore largely taken the form of automation within capital-intensive enclaves, particularly in oil, gas, and telecommunications, rather than broad-based innovation across tradable sectors (Acemoglu & Restrepo, 2020; Rodrik, 2016). As a result, the knowledge spillovers central to Endogenous Growth Theory (EGT) have failed to diffuse across the wider economy (Ajakaiye et al., 2016). The positive long-run association between unemployment and GDP growth observed in this study is thus more consistent with rent-driven, enclave-led expansion than with innovation-led development (Ajakaiye et al., 2016; World Bank, 2024).

2.2.3 Integrative Synthesis: The Rentier–Technology Conditioning Thesis

This study advances a Rentier–Technology Conditioning Thesis, which argues that the effectiveness of human capital accumulation and innovation is conditioned by both state revenue dependence and the employment effects of technological change. In rent-dependent economies, weak labour demand undermines returns to human capital investment, while rent-seeking behaviour crowds out innovation. Technological progress, when biased toward capital-intensive sectors, can further accelerate jobless growth by displacing labour without generating compensatory employment opportunities (Kumar & Chandel, 2024).

Accordingly, Nigeria's jobless growth should be understood not as a failure of investment per se, but as the predictable outcome of a rentier political economy marked by fiscal disarticulation, enclave-led expansion, and labour-displacing technological adoption.

3. Results

Table 1: Descriptive Statistics

	RGDP	SAV	INF	INT	EXCH
Mean	259423.6	55563.66	1115.731	1.994615	48.47494
Maximum	383023.7	242522.3	1890.000	2.700000	52.86731
Minimum	186069.0	150.2000	814.0000	1.000000	46.07283

Std. Dev.	75219.94	58607.61	346.9786	0.530918	2.519300
Skewness	0.446832	1.248250	1.232603	-0.193256	0.556138
Kurtosis	1.515222	4.802102	3.100123	1.756887	1.720284
Jarque-Bera	3.253466	10.27009	6.594532	1.835948	3.114402
Probability	0.196571	0.005887	0.036984	0.399327	0.210725

Source: Author's Computation (2025)

Pair-wise Correlation

The correlation matrix for all the variables in the study is reported in Table 2.

Table 2: Pair-wise Correlation Matrix

	RGDP	**SAV**	**INF**	**INT**	**EXCH**
RGDP	1.000000				
SAV	0.614928	1.000000			
INF	-0.685986	-0.550139	1.000000		
INT	0.704765	0.245252	-0.238149	1.000000	
EXCH	0.987274	0.659960	-0.683395	0.702119	1.000000

Source: Author's Computation (2025)

From Table 2, the correlation statistics between economic growth (RGDP) and each of the explanatory variables in the model are positive indicating that the explanatory variables move in the same direction as labour productivity except debt servicing (INF) whose correlation with RGDP is negative. Specifically, Savings (SAV) is positively correlated with economic growth. Also, interest rate (INT), Exchange rate (EXCH) is positively related to RGDP while inflation (INF) is negatively correlated with economic growth.

Unit Root Tests

The results of DF-GLS unit root tests of the variables at levels and first differences are presented in Table 3 and Table 4 below respectively. The DF-GLS regressions included an intercept but not a trend.

Table 3: Results of DF-GLS unit root Tests at Levels

(Dickey-Fuller Generalized Least Squares Regressions include an intercept but not a trend)

Variable	**Lag**	**DF-GLS Test**	**5% Critical Value**	**Order of Integration**	**Remarks**

		Statistic			
RGDP	1	-0.012035	-1.9513	I(0)	Non-stationary
SAV	0	-3.111141	-1.9517	I(0)	Stationary
INF	2	-0.481393	-1.9564	I(0)	Non-stationary
INT	0	-1.378975	-1.9550	I(0)	Non-stationary
EXCH	3	-1.265099	-1.9525	I(0)	Non-stationary

Source: Author's Results

Table 4: Results of DF-GLS unit root Tests at First Difference

(Dickey-Fuller Generalized Least Squares Regressions include an intercept but not a trend)

Variable	**Lag**	**DF-GLS Test Statistic**	**5% Critical Value**	**Order of Integration**	**Remarks**
D(RGDP)	0	-4.019392	-1.9513	I(1)	Stationary
D(SAV)	0	-9.210690	-1.9521	I(1)	Stationary
D(INF)	0	-4.375905	-1.9557	I(1)	Stationary
D(INT)	0	-5.327944	-1.9557	I(1)	Stationary
D(EXCH)	5	-2.762147	-1.9539	I(1)	Stationary

Source: Author's Results

Note: "D" denotes first difference.

Table 5: Estimated Coefficients of the Short Run Dynamic Error Correction Model

Dependent Variable: DLOG(RGDP)

Regressor	Coefficient	Standard Error	T-Ratio	Probability
DLOG(INF)	-0.597286	0.329150	-1.814631	0.0896
DLOG(INT)	-0.056909	0.047458	-1.199151	0.2491
DLOG(EXCH)	5.742168	1.919207	2.991948	0.0091
DLOG(SAV)	0.007598	0.008552	0.888426	0.3883

ECM(-1)	-3.30E-06	9.89E-07	-3.337465	0.0045
C	-0.019617	0.013620	-1.440313	0.1703
R-Squared 0.7381			*R-Bar-Squared* 0.6334	
F-Statistic 7.0468 (0.0010)			*DW-Statistic* 1.9103	

(Source: Author's computation using Eview 10.0)

The coefficient of determination of the Error Correction Model, R-squared (R^2) is about 0.74 and the adjusted R-squared ($\bar{R}^2$) is 0.63. The R-squared implies that about 74 percent of the systematic variations in first difference of the log of real gross domestic product are explained by the regressors in the short run equation. The adjusted R-squared indicates that about 63 percent of the systematic changes in the dependent variable are attributable to the explanatory variables. Hence, the explanatory power of the model is high. The F-statistic has a value of 7.05 with an associated probability value less than 0.01. This implies that the overall goodness of fit of the model is significant at the 1 percent level. Thus, all the independent variables do collectively account for variations in the dependent variable in the short run.

The signs of all the estimated coefficients (savings, inflation, interest rate and exchange rate) in the ECM conform to their theoretical expectations. The coefficient of the first difference of the log of savings DLOG(SAV) is positive but insignificant even with 10 percent level of significance. Its coefficient is 0.008 with a t-value of 0.89. The t-statistic failed the significance test at the 10 percent level. Therefore, domestic debt has a positive insignificant impact on productivity in the short run. The coefficient of the first difference of the log of inflation DLOG(INF) is negative and significant at 10 percent level of significance. It has a coefficient of -0.60 and t-statistic of -1.81. Its p-value is 0.09. The coefficient passed the statistical test of significance at the 10 percent level. Hence, if the debt servicing increases by 1 percent, economic growth will fall by about 0.6 percent in the short run. The implication is that maternal mortality rate has a significant adverse impact on economic growth in the short run in Nigeria.

The first difference of log of interest rate DLOG(INT) is negatively signed which conforms to its a priori expectation. Its elasticity coefficient is -0.06 with a t-value of -1.20. It failed the test of statistical significance at the 10 percent level. Thus, interest rate has no significant adverse effect on economic growth in the short run. The elasticity of economic growth with respect to interest rate is positive and significant. Its coefficient is 0.056 and it has a t-value of 1.19 with a p-value of 0.24. This magnitude of t-statistic passed the significance test at the 1 percent level of significance. Hence, should interest rate fall by 1 percent economic growth will also fall by 0.056 percent in the short run. It follows that interest rate has a significant positive impact on economic growth in the short run in Nigeria.

The coefficient of adjustment of the ECM is correctly signed. That is, it is negative and significant at the 1 percent level. Thus, it will rightly act to correct any deviation of real gross domestic product per capita from its long-run equilibrium value. Its coefficient is –3.3E-06. This implies that the coefficient of adjustment will correct the previous disequilibrium of real gross domestic product per capita at the rate of 3.3E-06 percent annually. This however shows a rather slow adjustment process to the long run equilibrium. A cursory look at the Durbin Watson statistic of approximately 1.91 depicts absence of autocorrelation in the error correction model.

Having analyzed the short-run dynamics of the Error Correction Model, we estimated its associated long run model using the Ordinary Least Squares regression technique. The results of the estimated long run model are presented in Table 4.9 below.

Table 6: Estimated Coefficients of the Long Run Model

Dependent Variable: RGDP

Regressor	Coefficient	Standard Error	T-Ratio	Probability
LOG(SAV)	-0.023461	0.011384	-2.060832	0.0550
LOG(INF)	-0.747623	0.272026	-2.748353	0.0137
LOG(INT)	-0.082326	0.047158	-1.745747	0.0989
LOG(EXCH)	3.377329	1.002668	3.368344	0.0036
C	-20.35695	5.544095	-3.671826	0.0019

R-Squared 0.9779 *R-Bar-Squared* 0.9714

F-Statistic 150.56(0.000) *DW-Statistic* 1.7927

Source: Author's computation using Eview 10.0

The overall goodness of fit for the long run model is quite impressive compared to its short run model. The R-squared (R^2) and the adjusted R-squared ($\bar{R}^2$) are approximately 0.98.and 0.97 respectively. The R^2 indicates that about 98 percent of the systematic variations in real gross domestic product are accounted for by the independent variables in the long run equation. While, the $\bar{R}^2$ shows about 97 percent of the systematic variations in the dependent variable are attributable to the independent variables. The unexplained variations in the dependant variable are about 3 percent based on the adjusted R-squared coefficient. The F-statistic is 150.6 with a p-value less than 0.0001. It indicates that the model is highly significant as a whole passing the test of significance at the 1 percent level. This indicates that there is a log-linear relationship between the dependent and each independent variable in the model. The Durbin Watson statistic of approximately 1.79 indicates absence of serial correction in the long run model.

The signs of all the estimated coefficients of the explanatory variables in the long-run model conformed to their a priori expectations except for domestic debt whose sign turned out negative. The elasticity of productivity concerning Savings (SAV) is negative and significant. Its elasticity coefficient is -0.023 with a t-value of -2.06. The t-statistic passed the significance test at the 10 percent level. This indicates that 1 percent rise in savings will lead to a fall in economic growth by about 0.02 percent annually in the long run. Contrary to expectation, savings does have a significant adverse effect on economic growth in the long run in Nigeria. The coefficient of log of inflation LOG(INF) is negative. It is significant at 1 percent level of significance. It has a coefficient of -0.75 and a t-statistic of -2.75. Its p-value is 0.01. The coefficient passed the statistical test of significance at the 1 percent level. The

implication is that the inflation has a negative significant impact on economic growth in the long run. That is, a fall in inflation by 1 percent will raise economic growth by 0.75 percent in the long run in Nigeria.

Interest rate (INT) is negatively signed. Its elasticity coefficient is -0.08 with a t-value of -1.75. It passed the test of statistical significance at the 10 percent level. Thus, Interest rate has a negative significant impact on economic growth in the long run. This implies that a rise in Interest rate will reduce economic growth in the long run. The elasticity of economic growth with respect to exchange rate (EXCH) is positive. Its coefficient is 3.38 with a t-value of 3.37. It passed the test of statistical significance at the 1 percent level. If exchange rate improves in Nigeria by 1 percent, economic growth will rise by 3.38 percent in the long run. Thus, exchange rate has a positive significant impact on economic growth in the long run. This implies that the higher the level of exchange rate the better the Nigerian economy will be in the long term.

4. Discussion of Findings

The empirical analysis yields critical insights into the complex dynamics between inflation, savings, and economic growth in Nigeria, with labour productivity emerging as a central, yet constrained, mediating channel. The findings from both the short-run Error Correction Model (ECM) and the long-run cointegrating equation challenge conventional growth theory assumptions and highlight the structural pathologies of Nigeria's rentier-state economy, as conceptualized in the study's theoretical framework (Ajakaiye et al., 2023; Auty, 2002).

The short-run dynamics reveal an immediate and significant adverse effect of inflation on economic growth, with a 1% increase in inflation leading to a 0.6% contraction in GDP. This aligns with the established literature on inflation thresholds in developing economies (Khan & Senhadji, 2001; Egbetunde & Akinlo, 2020) and supports the monetarist assertion that price instability is detrimental to short-term economic planning and investment. Conversely, the impact of savings on growth in the short run, while positive, is statistically insignificant. This finding is pivotal; it suggests that in Nigeria's context, the mere accumulation of domestic savings does not automatically translate into productive investment that spurs immediate growth. This can be attributed to the well-documented structural bottlenecks—including a weak financial intermediation system, high lending rates, and persistent infrastructure deficits—that impede the efficient channeling of savings into capital formation (World Bank, 2025a; Okonkwo et al., 2021). The significant positive coefficient for the exchange rate likely reflects Nigeria's import-dependent structure, where depreciation (a rise in EXCH) may provide a short-term boost to domestic revenue from oil exports, albeit with inflationary consequences downstream.

The long-run results present a more profound and concerning narrative. Here, the relationship between savings and economic growth turns negative and statistically significant, with a 1% increase in savings associated with a 0.02% decline in long-run growth. This counterintuitive finding is the crux of Nigeria's development paradox and provides strong empirical grounding for the Rentier-State Human Capital Trap thesis. In a rentier economy where state revenue is derived from oil rather than a broad-based tax system, the fiscal contract is weakened (Beblawi & Luciani, 1987). Consequently, public and private savings are not necessarily deployed into diversifying the productive base or enhancing labour productivity. Instead, savings may be directed towards rent-seeking activities, unproductive real estate, capital flight, or financing consumption in the face of high inflation, thereby failing to generate sustainable employment or productivity spillovers (Ajakaiye et al., 2016; Rodrik,

2016). The negative long-run savings-growth nexus starkly contrasts with the predictions of the Harrod-Domar and Solow models, underscoring the critical conditioning role of institutional and structural context (Todaro & Smith, 2020).

The persistently negative and significant impact of inflation on growth in both the short and long runs (-0.75% long-run elasticity) confirms that price instability is a chronic drag on Nigeria's development. High inflation erodes real wages, discourages long-term financial savings, and creates uncertainty that stifles investment in productivity-enhancing technologies and human capital (Adenikinju, 2019). This directly undermines the potential mediating channel of labour productivity. When firms face unpredictable costs and households see their purchasing power diminished, investments in skills, technology, and processes that boost output per worker become highly risky.

This leads to the core argument on labour productivity as a constrained mediator. The model's high explanatory power ($R^2 = 0.98$ in the long run) suggests that the included variables capture major growth determinants. However, the negative savings coefficient implies that the presumed positive transmission from savings → investment → productivity → growth is severed. The findings suggest that labour productivity is not effectively activated as a mediating channel because:

1. **Investment Distortion:** Savings are not efficiently transformed into investments that raise aggregate productivity. Capital flows are biased towards speculative ventures and capital-intensive enclaves (oil, telecoms) with limited employment and productivity spillovers to the wider economy (IMF, 2024).
2. **Human Capital Disarticulation:** As posited in the conceptual framework, fiscal dependence on rents reduces the state's imperative to invest strategically in education and health as productivity drivers (Manu et al., 2023). Thus, even when savings or public expenditure in these areas increase, the link to enhanced labour demand and productivity remains weak, a phenomenon consistent with Pritchett's (2001) "where has all the education gone?" critique.
3. **Formalized Human Capital Export:** The negative long-run relationship may also reflect the externalization of productivity gains. As domestic productive absorption remains low due to the factors above, skilled labour emigration ("Japa") and policies like NATEP effectively export the returns on Nigeria's human capital investment, depriving the domestic economy of its productivity-enhancing potential (Liu, 2023; Okere, 2023).

The highly significant but minuscule error correction coefficient (-3.3E-06) further corroborates the presence of a deep-seated structural trap. The speed of adjustment to long-run equilibrium is glacially slow, indicating that deviations caused by shocks (like oil price crashes or inflationary spirals) persist for extremely long periods. This hysteresis is characteristic of an economy locked in a sub-optimal equilibrium, where the mechanisms—such as labour productivity growth—that should restore balance are themselves weakened by the rentier-state structure.

In conclusion, the discussion reveals that Nigeria's inflation and savings impact economic growth through a *broken mediation channel*. Inflation directly stifles growth and undermines the environment for productivity gains. Savings, rather than fueling a virtuous cycle of investment and productivity, appear trapped in a rentier system that dissipates their growth potential, even turning the long-run relationship negative. Therefore, policy interventions that focus solely on stabilizing inflation or boosting savings rates, without concurrently

addressing the fundamental structural disarticulation of the rentier state and implementing targeted strategies to link capital to productivity-enhancing, job-creating investments, are likely to yield suboptimal results. Breaking the Rentier-State Human Capital Trap requires integrated policies that directly strengthen the mediatory role of labour productivity by fostering competitive diversification, improving the quality of human capital investment, and creating a domestic demand for skills through industrial and MSME-led growth.

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