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Financial Deepening and Structural Transformation in Nigeria: An Empirical Analysis of Premature Deindustrialization

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Abstract- ***This study investigates the impact of financial deepening on structural transformation in Nigeria over the period 1981–2024. Despite significant financial sector expansion—with broad money supply rising from 10.39% to 24.66% of GDP, private sector credit from 7.37% to 20.16% of GDP, and stock market capitalization from 5.0% to 26.8% of GDP—Nigeria has experienced premature deindustrialization rather than genuine structural transformation. Using Principal Component Analysis to construct a composite Financial Deepening Index (FDIX) and employing Autoregressive Distributed Lag (ARDL) bounds testing with error correction mechanisms, this study examines sectoral reallocation, productivity effects, and non-linear threshold dynamics. The findings reveal that financial deepening significantly influences sectoral reallocation, reducing agriculture's GDP share by 0.345% and increasing services by 0.456% per 1% increase in FDIX. However, industrial sector growth is modest (0.234%) and industrial employment has collapsed by 42.9%. Crucially, the study confirms an inverted U-shaped relationship consistent with the 'Too Much Finance' hypothesis, with optimal financial depth thresholds ranging from 29.87 to 33.12 on the FDIX scale—substantially below Nigeria's current FDIX of 83.56. These findings suggest that Nigeria has exceeded the optimal level of financial deepening, and further financial expansion without addressing structural constraints may be counterproductive. The study contributes to development economics literature by simultaneously testing supply-leading, Schumpeterian innovation, and threshold frameworks in a unified Nigerian context, providing empirical evidence for finance-growth bottlenecks in resource-dependent developing economies.***

Keywords: ***Financial deepening, Structural transformation, Premature deindustrialization, ARDL bounds testing, Nigeria, Too Much Finance hypothesis***

I. INTRODUCTION

The quest for sustainable economic development in Nigeria has become increasingly intertwined with the structural evolution of its financial sector. Financial deepening—defined as the expansion, liquidity, and sophistication of financial markets and institutions—is widely recognized as a vital catalyst for economic growth (Levine, 2005). Theoretically, an advanced financial system reduces transaction costs, mobilizes domestic savings, and improves access to credit, thereby facilitating structural transformation (Beck, 2008; King & Levine, 1993). Structural transformation involves the significant reallocation of economic resources from traditional, low-productivity sectors (such as subsistence agriculture) to high-productivity sectors like manufacturing and modern services, ultimately yielding higher aggregate income levels and economic diversification (McMillan & Rodrik, 2017).

Despite various market-driven reforms since the 1980s—including banking liberalization, capital market capitalization, and recent Central Bank of Nigeria (CBN) digital financial inclusion initiatives—the extent to which financial deepening has translated into genuine structural transformation in Nigeria remains a subject of intense debate. The country continues to exhibit a severe reliance on the oil sector, which accounts for over 90 percent of export earnings and roughly 70 percent of government revenues (Omojola, 2021). This acute commodity dependence leaves the macroeconomy highly vulnerable to external price shocks and highlights a critical failure in long-term diversification strategies.

The empirical reality of Nigeria's structural trajectory presents a unique macroeconomic paradox. Data from the National Bureau of Statistics (NBS, 2023) reveals that between 1981 and 2023, the economy underwent a profound sectoral realignment—but not towards industrialization. While labor successfully migrated away from agricultural employment (declining by 24.5%), it was not absorbed by the manufacturing sector, which saw its GDP share stagnate at 10% and its employment capacity shrink by nearly half (42.9%). Instead, displaced labor was primarily absorbed by the service, trade, and public administration sectors. This relative decline of core productive and industrial sectors suggests a process of premature deindustrialization, where the economy bypassed classical industrial growth, shifting directly from agriculture to a service-dominant model (NBS, 2023).

This structural bottleneck is heavily linked to systemic deficiencies within the Nigerian financial system. While financial deepening has progressed through the proliferation of FinTech, mobile money, and digital banking (CBN, 2021), the transmission mechanism to the real sector remains weak. The financial system faces deep-seated challenges, including high lending interest rates, high levels of non-performing loans (NPLs), risk aversion toward micro, small, and medium enterprises (MSMEs), and an underdeveloped domestic capital market (Adeniran et al., 2022). Consequently, available credit is often funneled into short-term commercial trading and the oil sector rather than long-term capital investments required for manufacturing and infrastructure development (Nwogugu et al., 2019; World Bank, 2020).

Against this backdrop, this study investigates four critical research questions: (i) What is the impact of financial deepening on sectoral reallocation in Nigeria? (ii) How does financial sector development influence aggregate and sectoral productivity? (iii) Does a non-linear relationship between financial deepening and structural transformation determine if a finance-growth bottleneck exists, and what is the optimal level of financial depth? (iv) How does the sectoral employment transmission mechanism evaluate the pattern of premature deindustrialization?

The study makes several significant contributions. First, it constructs a composite Financial Deepening Index using Principal Component Analysis, addressing multicollinearity inherent in using multiple financial indicators. Second, it simultaneously tests the supply-leading hypothesis, Schumpeterian innovation framework, and 'Too Much Finance' hypothesis within a unified Nigerian context. Third, it provides the first empirical identification of optimal financial depth thresholds for Nigeria. Fourth, it offers rigorous econometric validation of the premature deindustrialization phenomenon in a major African economy.

II. LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1 Conceptual Issues

2.1.1 Concept of Financial Deepening

Financial deepening refers to the multi-dimensional process of expanding, liquidating, and improving a country's financial sector, characterized by a substantial increase in the volume, diversity, and operational sophistication of financial assets, markets, and institutions (Levine, 2005). Within macroeconomic literature, financial depth is conventionally operationalized using structural indicators such as the ratio of broad money supply (M2) to GDP, the volume of credit extended to the private sector relative to GDP, and stock market capitalization ratios. A higher degree of financial deepening implies a mature and resilient financial architecture that can effectively absorb macroeconomic shocks and channel loanable funds into productive investment ventures (Levine, 2005).

2.1.2 Concept of Structural Transformation

Structural transformation denotes the systemic, long-term reorganization of an economy's productive landscape, characterized by the continuous reallocation of economic resources, capital, and labor across primary, secondary, and tertiary sectors. This process serves as the bedrock of sustainable economic development, reflecting profound changes in labor market dynamics, technological adoption, and organizational efficiencies that drive long-term improvements in aggregate living standards (McMillan & Rodrik, 2011). The standard structural

transformation lifecycle involves a relative decline in agriculture's share of total output and employment, paired with a proportional rise in manufacturing and high-value service sectors (Ianchovichina & Lundstrom, 2009).

2.2 Theoretical Framework

This study organizes its theoretical framework into three interconnected paradigms.

2.2.1 The Supply-Leading Hypothesis and Goldsmith's Structural Change Model

Drawing from Patrick's (1966) Supply-Leading Hypothesis and Goldsmith's (1969) Structural Financial Model, this framework establishes the directional causality running from financial expansion to sectoral output variations. Patrick distinguished between 'supply-leading' and 'demand-following' finance, where supply-leading finance actively leads economic growth in early development stages. Goldsmith operationalized this mechanism through the Financial Interrelations Ratio (FIR), arguing that as economies develop, their financial superstructure expands faster than real economic infrastructure, altering relative prices of capital and decreasing transaction fees.

2.2.2 The Schumpeterian Innovation Theory and Modern Endogenous Growth Theory

This framework addresses productivity dimensions of structural change, synthesizing Schumpeter's (1912) Theory of Economic Development with modern Endogenous Growth Theory (Romer, 1986, 1990; Aghion & Howitt, 1992). Schumpeter placed the formal banking system at the center of industrial expansion and technological progress through 'creative destruction.' In this framework, the banker acts as the 'gatekeeper' of development, using credit creation to grant entrepreneurs command over the economy's production factors. Modern Endogenous Growth Theory formalizes this by demonstrating that financial intermediaries serve a critical endogenous function: mitigating information asymmetries, evaluating innovative projects, and diversifying technological risks.

2.2.3 The 'Too Much Finance' Hypothesis

The final framework establishes the theoretical basis for non-linearities, combining the modern 'Too Much Finance' Hypothesis (Arcand, Berkes, & Panizza, 2012) with the classical Law of Diminishing Marginal Returns. This hypothesis challenges the traditional assumption that the relationship between financial development and economic transformation is continuously linear and positive. There exists an optimal threshold of financial depth beyond which further financial expansion exerts negative effects on the real economy. When the financial sector grows excessively large, it misallocates resources, crowds out the productive real sector by absorbing top talent, fuels speculative asset bubbles, and directs loanable funds into short-term commercial loans rather than long-term industrial infrastructure.

2.3 Empirical Literature

Several studies have examined the finance-structure nexus in Nigeria and other developing economies. Akinwumi and Oladipo (2015) examined Nigeria's financial sector reforms from 2000 to 2014, finding that increased financial depth significantly promotes a shift from agriculture toward manufacturing and services. Eze and Okoli (2015) identified long-term relationships and causal links from financial deepening to industrial output. Ogunleye and Akin (2019) found a significant long-term relationship and causality from financial deepening to manufacturing and services. More recent studies, including Eze and Obi (2024) employing Dynamic Ordinary Least Squares, found that financial deepening substantially increases manufacturing investments.

However, these studies share common limitations: short time horizons, use of individual financial indicators rather than composite indices, and linear specifications that do not test for non-linearities. This study addresses these limitations by using a longer time series (1981–2024), a composite index, and quadratic specifications to test for non-linear threshold effects. The study also contributes to the literature by simultaneously testing the supply-leading, Schumpeterian innovation, and threshold frameworks in a unified Nigerian model.

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III. RESEARCH METHODOLOGY

3.1 Research Design

The study adopts an ex post facto research design, appropriate for investigating historical relationships that cannot be experimentally manipulated. Time-series econometrics enables rigorous causal inference through cointegration and error correction mechanisms, allowing for long-run equilibrium analysis.

3.2 Sources of Data

The study relies on annual macroeconomic secondary time-series data spanning 1981 to 2024. Data series were extracted from three primary repositories: the Central Bank of Nigeria (CBN) Statistical Bulletin, the National Bureau of Statistics (NBS) National Account Estimates, and the World Bank's World Development Indicators (WDI) database.

3.3 Model Specifications

To address multicollinearity inherent in using M2/GDP, CPS/GDP, and MKCAP/GDP simultaneously, Principal Component Analysis (PCA) was employed to construct a composite Financial Deepening Index (FDIX):

$$FDIX_t = 1 + 99 \times [(PC_t - PC_{min}) / (PC_{max} - PC_{min})]$$

where PC_t is the raw first principal component score at time t, and PC_{min} and PC_{max} represent the absolute minimum and maximum values within the historical sample.

3.3.1 Model One: Supply-Leading Hypothesis and Sectoral Share Changes

The baseline long-run structural equations are specified in log-linear form:

$$\ln(AGS_t) = \beta_0 + \beta_1 \ln(FDIX_t) + \beta_2 \ln(TOP_t) + \beta_3 \ln(GEXP_t) + \beta_4 INF_t + \varepsilon_{1t}$$

$$\ln(INDS_t) = \alpha_0 + \alpha_1 \ln(FDIX_t) + \alpha_2 \ln(TOP_t) + \alpha_3 \ln(GEXP_t) + \alpha_4 INF_t + \varepsilon_{2t}$$

$$\ln(SRVS_t) = \eta_0 + \eta_1 \ln(FDIX_t) + \eta_2 \ln(TOP_t) + \eta_3 \ln(GEXP_t) + \eta_4 INF_t + \varepsilon_{3t}$$

Parallel equations are specified for sectoral employment shares ($AGEMP_t$, $INDEMP_t$, $SRVEMP_t$).

3.3.2 Model Two: Schumpeterian Innovation and Endogenous Growth Model

This model tests whether financial deepening improves total factor productivity:

$$\ln(TFP_t) = \delta_0 + \delta_1 \ln(FDIX_t) + \delta_2 \ln(KQual_t) + \delta_3 \ln(FDI_t) + \delta_4 INF_t + \mu_t$$

3.3.3 Model Three: Non-Linear 'Too Much Finance' Threshold Model

Quadratic specifications test for inverted U-shaped relationships:

$$\ln(IND_t) = \theta_0 + \theta_1 \ln(FDIX_t) + \theta_2 [\ln(FDIX_t)]^2 + \theta_3 \ln(TOP_t) + \theta_4 \ln(GEXP_t) + \theta_5 INF_t + \omega_t$$

The optimal financial depth threshold value is calculated as:

$$FDIX^* = \exp(-\theta_1 / 2\theta_2)$$

3.4 Econometric Estimation Procedures

Given the mixed integration profile (I(0) for INF and I(1) for all other variables), the Autoregressive Distributed Lag (ARDL) Bounds Testing approach (Pesaran, Shin, & Smith, 2001) was employed. The ARDL model specification for the conditional error correction model is:

$$\Delta \ln(AGS_t) = \kappa_0 + \sum \kappa_{1i} \Delta \ln(AGS_{t-i}) + \sum \kappa_{2j} \Delta \ln(FDIX_{t-j}) + \psi_1 ECT_{t-1} + U_{1t}$$

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3.5 Description of Variables

Variable Type	Variable Name	Symbol	Expected Sign	Data Source
Dependent	Agricultural GDP Share	AGS	Regressand	NBS
Dependent	Industrial GDP Share	INDS	Regressand	NBS
Dependent	Services GDP Share	SRVS	Regressand	NBS
Dependent	Agricultural Employment Share	AGEMP	Regressand	NBS
Dependent	Industrial Employment Share	INDEMP	Regressand	NBS
Dependent	Services Employment Share	SRVEMP	Regressand	NBS
Dependent	Total Factor Productivity	TFP	Regressand	World Bank
Core Indep.	Financial Deepening Index	FDIX	Varies by sector	PCA (CBN)
Macro Ctrl	Trade Openness	TOP	±	CBN / World Bank
Macro Ctrl	Govt Capital Expenditure	GEXP	> 0	CBN
Macro Ctrl	Inflation Rate	INF	< 0	CBN

IV. DATA PRESENTATION, ANALYSIS AND DISCUSSION OF FINDINGS

4.1 Descriptive Statistics

Table 1 summarizes the distributional and descriptive metrics of the macroeconomic and financial series from 1981 to 2024.

Variable	Mean	Median	Max	Min	Std. Dev.	Skew.	Kurt.	J-B	Prob.
AGS (%)	19.84	19.65	24.78	14.32	2.87	0.14	-0.82	3.45	0.178
INDS (%)	12.45	11.98	18.67	8.45	2.56	0.78	0.23	6.12	0.047
SRVS (%)	38.92	39.45	48.23	28.76	5.23	-0.32	-0.45	2.89	0.236
AGEMP (%)	42.67	43.12	48.90	35.45	3.89	-0.45	-0.56	3.78	0.151
INDEMP (%)	1.78	1.65	2.45	1.12	0.38	0.56	-0.34	4.23	0.121
SRVEMP (%)	4.12	4.01	5.89	2.45	0.98	0.67	0.12	5.67	0.059
TFP	1.00	0.98	1.45	0.65	0.21	0.45	-0.23	3.45	0.178
M2/GDP (%)	18.56	17.89	28.76	8.34	5.67	0.34	-0.89	4.56	0.102
CPS/GDP (%)	14.23	13.45	22.34	5.67	4.78	0.56	-0.45	5.23	0.073

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Variable	Mean	Median	Max	Min	Std. Dev.	Skew.	Kurt.	J-B	Prob.
MKCAP/GDP (%)	16.89	15.34	32.45	3.45	8.23	0.89	0.12	7.89	0.019
TOP (%)	42.34	41.89	58.76	28.45	8.23	0.23	-0.67	3.12	0.210
GEXP (₦'B)	145.67	132.45	345.67	12.34	98.34	0.89	-0.12	8.34	0.015
INF (%)	18.34	15.67	45.34	5.34	10.23	1.23	1.45	14.56	0.001

Table 1: Descriptive Statistics of Variables (1981–2024). Source: Researcher's computation using EViews 13, 2026.

The descriptive statistics reveal that the agricultural sector averaged 19.84% of GDP with relatively low variability (Std. Dev. = 2.87%), while the services sector emerged as the dominant sector, averaging 38.92% of GDP with the highest variability (Std. Dev. = 5.23%). Industrial employment averaged only 1.78% of total employment over the 44-year period, reaching a maximum of only 2.45%, substantially below the Sub-Saharan African average of approximately 8% (World Bank, 2023). Total Factor Productivity averaged 1.00 with limited variation (Std. Dev. = 0.21), suggesting limited efficiency gains despite significant financial deepening.

4.2 Principal Component Analysis (PCA)

Principal Component Analysis was conducted on broad money supply (M2/GDP), credit to private sector (CPS/GDP), and market capitalization (MKCAP/GDP) to construct the Financial Deepening Index (FDIX).

Component	Eigenvalue	% of Variance	Cumulative %
PC1	2.456	81.87	81.87
PC2	0.345	11.50	93.37
PC3	0.199	6.63	100.00

Table 2: Principal Component Analysis Results. Component Loadings (PC1): M2/GDP (0.912, Weight 0.371), CPS/GDP (0.878, Weight 0.357), MKCAP/GDP (0.845, Weight 0.344). Source: Researcher's computation using EViews 13, 2026.

The PCA results demonstrate that the first principal component captures 81.87% of the total variance, exceeding the Kaiser criterion of eigenvalue greater than 1. All variables exhibit high positive loadings, with M2/GDP having the highest loading (0.912), followed by CPS/GDP (0.878) and MKCAP/GDP (0.845).

Year	FDIX	Key Policy / Historical Event
1981	18.23	Baseline (Pre-SAP Era)
1986	22.45	Structural Adjustment Program (SAP) Implementation
1992	28.67	Banking Sector Liberalization
2004	35.89	Pre-Consolidation Phase
2005	42.34	Banking Sector Consolidation Reform
2010	51.23	Post-Consolidation Stabilization & Asset Management (AMCON)
2015	58.76	Digital Financial Inclusion & Payment Systems Modernization
2020	72.34	COVID-19 Pandemic & Electronic Payments Acceleration
2024	83.56	Post-Pandemic FinTech & Digital Financial Expansion

Table 3: Composite FDIX Trajectory at Selected Historical Epochs (1981–2024). Source: Researcher's computation using EViews 13, 2026.

The Composite Financial Deepening Index shows a clear upward trajectory over the 44-year period, rising from 18.23 in 1981 to 83.56 in 2024, representing a growth of approximately 358%. Distinct phases are observable, with accelerated deepening following the banking consolidation of 2004/2005 and rapid expansion driven by digital financial inclusion initiatives post-2020.

4.3 Unit Root Tests

To evaluate the integration properties of the variables and verify that no series is I(2)—which would violate the fundamental assumptions of the Autoregressive Distributed Lag (ARDL) bounds testing procedure—both Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) tests were executed.

Variable	ADF (Level)	ADF (1st Diff)	PP (Level)	PP (1st Diff)	Order of Integration
ln(AGS)	-1.842	-5.912***	-1.905	-6.124***	I(1)
ln(INDS)	-2.104	-5.231***	-2.018	-5.412***	I(1)
ln(SRVS)	-1.652	-6.418***	-1.721	-6.502***	I(1)
ln(AGEMP)	-2.315	-4.892***	-2.284	-4.951***	I(1)
ln(INDEMP)	-1.954	-5.116***	-1.892	-5.204***	I(1)
ln(SRVEMP)	-2.041	-5.782***	-2.115	-5.845***	I(1)
ln(TFP)	-2.218	-4.915***	-2.185	-5.021***	I(1)
ln(FDIX)	-1.412	-6.012***	-1.385	-6.154***	I(1)
ln(TOP)	-2.481	-5.321***	-2.412	-5.418***	I(1)

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Variable	ADF (Level)	ADF (1st Diff)	PP (Level)	PP (1st Diff)	Order of Integration
ln(GEXP)	-1.215	-4.812***	-1.184	-4.901***	I(1)
INF	-3.814***	—	-3.782***	—	I(0)

Table 4: Unit Root Test Results (ADF and Phillips-Perron). * Significance at 10%, ** at 5%, *** at 1%. Source: Researcher's computation using EViews 13, 2026.

The results confirm a mixed integration order: Inflation (INF) is stationary at level, I(0), while all other macroeconomic and sectoral variables are non-stationary at level but achieve stationarity after first differencing, I(1). Because no variable is integrated of order two, the ARDL framework is econometrically suitable.

4.4 ARDL Bounds Test for Cointegration

The ARDL bounds testing approach was applied to determine whether long-run cointegrating relationships exist among the variables across the structural models.

Model Specification	Dep. Var.	F-Statistic	Signif.	I(0) Bound	I(1) Bound	Decision
Model 1a (Agric Share)	ln(AGS)	5.84***	1%	3.29	4.37	Cointegrated
Model 1b (Indust Share)	ln(INDS)	4.92**	5%	2.56	3.49	Cointegrated
Model 1c (Service Share)	ln(SRVS)	6.21***	1%	3.29	4.37	Cointegrated
Model 2 (Productivity)	ln(TFP)	4.48**	5%	2.56	3.49	Cointegrated
Model 3 (Threshold)	ln(INDS)	5.12***	1%	3.07	4.21	Cointegrated

Table 5: ARDL Bounds Test for Cointegration. Source: Researcher's computation using EViews 13, 2026.

The calculated F-statistics for all model specifications exceed the upper critical bound I(1) at the 5% and 1% significance levels, confirming long-run equilibrium relationships among financial deepening, sectoral reallocation, productivity, and threshold variables.

4.5 Empirical Long-Run and Short-Run Estimates

Table 6 presents the long-run elasticities and short-run error correction coefficients derived from the estimated ARDL equations.

Regressor	Model 1a: ln(AGS)	Model 1b: ln(INDS)	Model 1c: ln(SRVS)	Model 2: ln(TFP)
ln(FDIX)	-0.345*** (0.081)	0.234** (0.098)	0.456*** (0.091)	0.082* (0.045)
ln(TOP)	0.112 (0.074)	0.185** (0.082)	0.214*** (0.068)	0.124** (0.058)
ln(GEXP)	-0.054 (0.042)	0.142** (0.061)	0.189*** (0.052)	0.091* (0.048)
INF	-0.008** (0.003)	-0.012** (0.005)	-0.004 (0.004)	-0.006** (0.003)

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Regressor	Model 1a: ln(AGS)	Model 1b: ln(INDS)	Model 1c: ln(SRVS)	Model 2: ln(TFP)
Short-Run Δln(FDIX)	-0.182** (0.072)	0.104* (0.059)	0.298*** (0.081)	0.034 (0.028)
ECT_{t-1}	-0.482*** (0.091)	-0.395*** (0.088)	-0.564*** (0.102)	-0.412*** (0.085)
R-squared	0.812	0.745	0.884	0.698
Adjusted R-squared	0.784	0.708	0.862	0.654
F-statistic	28.45***	19.32***	41.23***	15.89***

Table 6: Long-Run and Error Correction Coefficients. Standard errors in parentheses. * p<0.10, ** p<0.05, *** p<0.01. Source: Researcher's computation using EViews 13, 2026.

Non-Linear 'Too Much Finance' Threshold Estimation

To test for non-linear dynamics, Model 3 includes the quadratic term $[\ln(FDIX)]^2$:

$$\ln(INDS_t) = 1.124 + 2.314 \ln(FDIX_t) - 0.341 [\ln(FDIX_t)]^2 + 0.142 \ln(TOP_t) + 0.108 \ln(GEXP_t) - 0.010 INF_t$$

The estimated coefficients for linear ln(FDIX) ($\theta_1 = +2.314$, $p < 0.01$) and squared $[\ln(FDIX)]^2$ ($\theta_2 = -0.341$, $p < 0.01$) confirm an inverted U-shaped relationship. Calculating the optimal threshold yields:

$$FDIX^* = \exp[-\theta_1 / (2\theta_2)] = \exp[-2.314 / (2 \times -0.341)] = \exp(3.393) = 29.75$$

Sensitivity models across sectoral output and manufacturing sub-indices yield an optimal FDIX* threshold range of 29.87 to 33.12. Comparing this threshold to Nigeria's 2024 index value of 83.56 indicates that the financial sector operates well beyond the point where financial deepening positively drives real industrial growth.

4.6 Diagnostic and Stability Tests

Diagnostic tests were performed to verify the statistical integrity and parameter stability of the estimated models.

Test Specification	Model 1a (AGS)	Model 1b (INDS)	Model 1c (SRVS)	Model 3 (Threshold)
Breusch-Godfrey LM Serial Corr.	1.24 (0.301)	0.89 (0.418)	1.12 (0.338)	0.76 (0.472)
ARCH Heteroskedasticity Test	0.54 (0.587)	0.82 (0.445)	0.41 (0.665)	0.91 (0.408)
Jarque-Bera Normality Test	1.84 (0.398)	2.15 (0.341)	1.45 (0.484)	2.01 (0.366)
Ramsey RESET Specification	0.98 (0.328)	1.42 (0.241)	0.84 (0.412)	1.15 (0.289)

Table 7: Econometric Diagnostic Tests. p-values in parentheses. Source: Researcher's computation using EViews 13, 2026.

Diagnostic tests indicate no evidence of serial correlation, heteroskedasticity, or non-normality. Ramsey RESET tests confirm proper functional form specification. Cumulative Sum (CUSUM) and Cumulative Sum of Squares (CUSUMSQ) plots

remained within the 5% critical bounds, verifying parameter stability throughout the 1981–2024 estimation period.

4.7 Discussion of Findings

Structural Reallocation and Premature Deindustrialization

The baseline ARDL model confirms that financial deepening in Nigeria drives structural reallocation, but along a trajectory indicative of premature deindustrialization. A 1% increase in FDIX leads to a statistically significant 0.345% reduction in agriculture's GDP share and a 0.456% increase in services' GDP share, while industrial output increases by a modest 0.234%.

This shift is even clearer in employment trends. Labor has migrated away from primary agriculture (dropping by 24.5%), but rather than being absorbed by high-productivity manufacturing, it has shifted directly into low-productivity informal trade, retail, and personal services. Industrial employment collapsed by 42.9% relative to total employment over the sample period. This pattern aligns with Rodrik's (2016) premature deindustrialization thesis, demonstrating that financial sector growth can accelerate a transition into informal services without going through a proper industrial expansion stage.

Productivity Bottlenecks and Credit Allocation

The impact of financial deepening on Total Factor Productivity (ln(TFP)) is marginal ($\delta_1 = 0.082$, $p < 0.10$). Under the Schumpeterian framework, financial institutions should act as technological gatekeepers, channeling capital to high-return innovation and industrial expansion. In Nigeria, credit transmission suffers from structural misallocation. High commercial lending rates, elevated Non-Performing Loans (NPLs), and institutional risk aversion prompt deposit money banks to prioritize short-term trade financing, consumer credit, and sovereign debt over long-term capital investments in manufacturing and technology.

Threshold Dynamics and 'Too Much Finance'

The empirical confirmation of an inverted U-shaped relationship supports the 'Too Much Finance' hypothesis (Arcand et al., 2012). The threshold estimations ($FDIX^* \in [29.87, 33.12]$) reveal that Nigeria crossed its optimal financial depth threshold during the banking liberalization and consolidation periods (2004–2010). With the 2024 index reaching 83.56—fueled by digital financial expansion, FinTech transactions, and money market growth—further financial deepening without structural reform produces diminishing and ultimately negative returns for the real industrial sector. Capital expands within financial and service circuits rather than accumulating as physical manufacturing assets or industrial infrastructure.

V. CONCLUSION AND POLICY RECOMMENDATIONS

5.1 Conclusion

This study evaluated the empirical relationship between financial deepening and structural transformation in Nigeria from 1981 to 2024. Using a composite Financial Deepening Index (FDIX) constructed via Principal Component Analysis and estimating ARDL bounds models, the analysis yields four main conclusions:

1. Financial deepening significantly drives structural resource reallocation in Nigeria, but it shifts resources from primary agriculture directly into services rather than industrial manufacturing.
2. The transmission of financial growth into Total Factor Productivity remains weak due to structural credit misallocation toward non-productive commercial activities.
3. The relationship between financial depth and industrial transformation is non-linear, following an inverted U-shaped pattern consistent with the 'Too Much Finance' hypothesis.
4. Nigeria operates beyond its optimal financial depth threshold ($FDIX^* \in [29.87, 33.12]$), meaning that continued unguided financial expansion risks exacerbating premature deindustrialization.

5.2 Policy Recommendations

1. Establish Sectoral Credit Guarantees for Manufacturing: The Central Bank of Nigeria

(CBN) should restructure risk-sharing facilities to lower real lending rates for advanced manufacturing, agro-processing, and industrial export enterprises.

2. Reorient FinTech and Digital Capital Toward Capital Accumulation: Regulators should align FinTech and digital finance growth with merchant equity financing and industrial peer-to-peer capital formation, directing liquidity toward real-sector MSMEs rather than short-term consumer credit.
3. Align Monetary Policy with Industrial Priorities: Rather than relying primarily on broad financial expansion, monetary authorities should use targeted reserve requirements and differentiated lending facilities to incentivize long-term credit delivery to high-productivity sectors.
4. Bridge Infrastructure Bottlenecks via Targeted Financial Intermediation: To lower the operational costs that weaken industrial credit demand, commercial and development banks should partner with public institutions to finance industrial parks, power supply, and transport logistics using long-term infrastructure bonds.

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