

Tax Incentive Practices and Financial Performance of Listed Consumer Goods Manufacturing Companies in Nigeria

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Abstract- *Despite substantial tax incentives, the Nigerian manufacturing sector continues to face low profitability and sluggish growth. This study examines the incentive effect of annual allowance (ANALL) on the financial performance of listed consumer goods manufacturing companies, using return on assets (ROA) as the performance measure. Panel data from ten listed firms over the period 2017 to 2024 were analysed using panel regression techniques. Both fixed- and random-effects models were estimated, with the Hausman test indicating the appropriateness of the random-effects specification. The results reveal that annual allowance has a positive and statistically significant effect on ROA, suggesting that depreciation-based tax incentives enhance asset utilization and support capital reinvestment. The findings highlight the importance of well-structured and clearly administered tax incentives. Policy implications include simplifying claiming procedures, improving taxpayer guidance, and aligning tax policy with firms' investment planning to support sustained performance in the consumer goods manufacturing sector.*

Keywords: *Tax Incentives, Financial Performance, Annual Allowance, Return on Assets, Consumer Goods Manufacturing.*

I. INTRODUCTION

This study is situated within the field of taxation, where governments employ fiscal policy instruments to generate revenue, redistribute income, regulate economic activity, and promote developmental goals.

Among these instruments, tax incentives have gained prominence, especially in developing economies, as tools to stimulate investment, enhance productivity, and correct market failures (Kaplan, 2013; Greeff, 2023; Okelle, 2017). Market imperfections such as limited access to finance, information asymmetry,

poor infrastructure, and macroeconomic instability can hinder firms from pursuing productive investment (Al-Thaqeb et al., 2022; Kuewumi, 2018).

Tax incentives are designed to mitigate these constraints, encouraging firms to invest despite risks and uncertainties, including those arising from global challenges like the COVID-19 pandemic, climate change, and geopolitical disruptions. In Nigeria, the government allocates substantial resources to tax incentives, including capital allowances (initial and annual), income tax exemptions, investment tax credits, and pioneer status reliefs, aimed at fostering industrial development and economic sustainability (Akinyemi et al., 2024; Oriakhi & Osemwengie, 2013).

Despite these measures, the Nigerian economy continues to experience stagnant manufacturing output, weak firm-level profitability, and underperformance in critical sectors (Raphael et al., 2019; Uremadu & Onyekachi, 2018). Some scholars and Policy Reports argue that extensive tax expenditures in Nigeria have significantly reduced public revenue, raising questions about the net economic benefits of such incentives (Shauna & Fredoun, 2006; Fischer et al., 2023; World Bank, 2023; International Monetary Fund [IMF], 2023).

The consumer goods manufacturing sector, which produces essential items such as food, beverages, and household products, plays a critical role in Nigeria's industrialization and employment creation. Yet, evidence on the effectiveness of tax incentives in improving firm-level financial performance in this sector remains inconclusive. Existing studies largely

adopt macroeconomic or cross-sectoral perspectives (Nnubia & Obiora, 2018; Ugwu et al., 2020), leaving the firm-level impact of specific incentives, particularly annual allowance, underexplored. Furthermore, earlier research often employs descriptive methods or small sample surveys, limiting causal inference and generalisability (Essiet & Paago, 2024; Ellawule et al., 2024).

The availability of audited financial statements and detailed disclosures from listed consumer goods firms provides an opportunity to examine the firm-level effects of annual allowance. By employing panel data methods that control for firm-specific effects over time, this study addresses an important empirical gap. It provides robust evidence on the incentive effect of annual allowance. The findings have practical implications for policymakers and tax authorities. Evidence on the effectiveness of specific tax incentives can guide decisions on resource allocation, incentive design, and administrative practices. By linking fiscal policy to operational efficiency (ROA), this study contributes both to the academic literature on taxation and investment behaviour. It also contributes to evidence-based policymaking in Nigeria's manufacturing sector.

1.1 Statement of the Problem

Tax incentives are designed to stimulate industrial growth and enhance financial sustainability (Easson & Zolt, 2013). However, in Nigeria, their actual effectiveness remains unclear. Governments continue to allocate substantial resources to incentives despite persistent low tax revenue mobilization and underperformance in the manufacturing sector (Uremadu & Onyekachi, 2018; Fischer et al., 2023).

Existing literature lacks sufficient sector-specific studies assessing how incentives, particularly annual allowances, influence firm-level financial performance. As a result, it is difficult to determine whether incentives achieve intended benefits or constitute forgone revenue without corresponding gains (Alegana, 2014). This study aims to fill this gap by investigating the impact of annual allowance on ROA among listed consumer goods manufacturing firms in Nigeria from 2017 to 2024. To address the problem identified above, Figure 1 presents the conceptual framework underpinning the study.

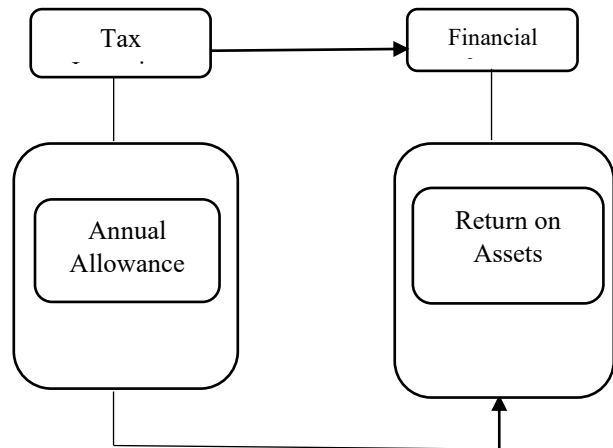


Figure 1: Conceptual Framework

Sources: Ohaka and Agundu (2012); Okelle (2017) and researchers' conceptualization.

1.2 Aim and Objective of the Study

The study aims to investigate the effect of tax incentive practices on financial performance among listed consumer goods manufacturing companies in Nigeria using panel data from 2017 to 2024. Specifically, the study seeks to:

1. Examine the incentive effect of annual allowance on return on assets among listed consumer goods manufacturing companies in Nigeria using panel data from 2017 to 2024.

1.3 Research Question

1. What is the incentive effect of annual allowance on return on assets among listed consumer goods manufacturing companies in Nigeria over the period 2017 to 2024?

1.4 Research Hypothesis

HO1: There is no significant incentive effect of annual allowance on return on assets among listed consumer goods manufacturing companies in Nigeria from 2017 to 2024.

II. LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1. Theoretical Framework

This study is anchored on the Neoclassical Investment Theory (Jorgenson, 1963). The theory

explains how firms make investment decisions based on the relationship between the expected marginal product of capital and the user cost of capital.

According to this theory, firms continue to invest in productive assets when the marginal benefit of doing so exceeds their cost. Fiscal policies, particularly tax incentives such as capital allowances, play an essential role. They reduce the user cost of capital and encourage firms to acquire and maintain productive assets.

Hall and Jorgenson (1967) expanded this theory by showing that tax provisions, such as depreciation allowances and investment credits, lower the effective cost of capital and influence firms' optimal investment levels. Auerbach (1983) further demonstrated that corporate tax structures directly affect firms' investment behaviour and financial performance. This is done by altering cash flows, expected returns, and cost of financing.

Within this framework, annual allowance, a key component of capital allowances, functions as a recurring tax relief that allows firms to deduct a portion of the cost of qualifying assets annually.

This deduction reduces taxable profits and frees up internal resources for reinvestment. Firms reinvest in operations, technological upgrades, and asset maintenance, which can subsequently improve financial performance indicators such as return on assets (ROA).

Empirical evidence supports the theoretical framework by linking annual allowance to firm performance. Nigerian studies show mixed outcomes.

Edori and Des-Wosu (2024) found that capital allowances positively affected net profit margin among MSMEs, while Nnah (2024) reported no significant effect on ROE for listed agricultural firms. These inconsistencies highlight the importance of sector-specific dynamics and firm characteristics in shaping the effectiveness of tax incentives.

Recent international studies reinforce this perspective. Guo and Xu (2021) found that fiscal incentives enhance firms' operational efficiency and

asset productivity when combined with digital transformation. Al-Thaqeb et al. (2022) observed that predictable policy environments strengthen the effect of tax incentives on corporate performance.

Similarly, evidence from Sub-Saharan Africa indicates that the effectiveness of capital-related tax incentives, including annual allowance, depends on policy clarity, regulatory quality, and firm-level capacity (Celani et al., 2022). Specifically, targeted investment incentives influence corporate effective tax rates. Effective tax rates affect investment decisions and profitability (Celani et al., 2022).

Building on neoclassical investment theory and the empirical evidence, we position annual allowance as a theoretically grounded fiscal tool. It can enhance firm performance by lowering the cost of capital and improving asset utilization efficiency.

However, findings from prior studies are mixed. In the context of the structural challenges facing Nigeria's manufacturing sector, this study empirically investigates whether annual allowance significantly influences ROA among listed consumer goods manufacturing companies. This theoretical framing provides the foundation for interpreting the study's results. It also contributes to ongoing debates on the effectiveness of tax incentives in developing economies.

2.2 Tax Incentives and Investment Behavior

Tax incentives are fiscal tools designed to reduce a firm's effective tax burden, encouraging investment and economic activity (Dotun, 2016; Kaplan, 2013; Pravdiuk, 2022). Globally, governments use incentives such as capital allowances, accelerated depreciation, tax holidays, and research and development (R&D) credits to stimulate investment, attract foreign direct investment, and enhance competitiveness (United Nations Conference on Trade and Development [UNCTAD], 2023; Klemm & van Prays, 2012; Organisation for Economic Co-operation and Development [OECD], 2001; OECD, 2022). Evidence shows that well-designed incentives can promote asset acquisition, research and development, employment creation, and regional

development (Alegana, 2014; Appiah-Kubi et al., 2021).

However, studies in emerging economies report mixed outcomes. Evidence from African countries suggests that the effectiveness of tax incentives on firm-level investment and Foreign Direct Investment (FDI) inflows is moderated by governance quality (Klemm & van Prays, 2009; Lu et al., 2023).

For example, Abille and Mumuni (2023) found that better institutional and governance indicators strengthen the positive impact of corporate tax incentives on FDI inflows across Africa. According to OECD's analyses, tax incentives, if poorly designed or excessively generous, may erode government revenue and provide limited or no additional investment or productivity gains (OECD, 2022). These findings highlight that the effectiveness of tax incentives is context-dependent and may vary by sector, firm size, and institutional quality.

2.3 Capital Allowances and Annual Allowance

Capital allowances provide tax relief on qualifying capital expenditures, substituting for depreciation in tax computations (Nduati, 2020). They serve as a policy instrument to incentivize investment in productive assets. Annual allowance, a type of capital allowance, allows firms to deduct a portion of an asset's cost annually over its tax life (Uchehgbu, 2012; Ohaka & Agundu, 2013).

Recent studies emphasise that capital allowances can improve financial performance by reducing taxable income and freeing funds for reinvestment (Gitonga et al., 2023; Edori & Des-Wosu, 2024). Some empirical studies argue that capital allowances and depreciation-based tax incentives may improve financial performance by enhancing cash flow and supporting reinvestment, though evidence on profitability and ROA is limited and context-specific

(Timah & Chukwu, 2021; Gitonga et al., 2023; Dotun, 2016; Kaplan, 2013; Pravdiuk, 2022). International studies further support this potential of tax incentives.

Reporting that they increase investment and profitability in various emerging and developed economies when properly targeted and administered (Peng et al., 2023; Na et al., 2021).

However, while capital allowances, including annual allowances, have been associated with improved financial performance in Nigerian manufacturing firms (Oluwole et al., 2020; Timah & Chukwu, 2021), empirical evidence isolating the effect of annual allowances on ROA is limited.

This gap underscores the need for focused investigation on the effect of annual allowance on ROA in the Nigerian consumer goods sector, where such incentives are widely used but under-evaluated.

2.4 Tax Incentives and Firm Financial Performance

Financial performance, often measured by return on assets (ROA), return on equity (ROE), and net profit margin, reflects the efficiency with which a firm uses resources to generate earnings (Mandipa & Sibindi, 2022; Guo & Xu, 2021). International evidence from sub-Saharan African countries suggests that tax incentives can improve profitability by reducing effective tax rates and increasing available capital for reinvestment (Celani et al., 2022).

Peng et al. (2023) reported that manufacturing firms in China exhibited higher ROA and asset growth when stable capital allowance schemes were implemented. Similarly, Na et al. (2021) found that incentives positively influenced operational efficiency in selected Asian markets.

While Zhang et al. (2024) study posited that tax incentives did not significantly affect the performance of National Equities Exchange and Quotations (NEEQ) listed firms in China, although they significantly influenced A-share listed firms. Studies show that the effectiveness of tax incentives varies across sectors, firm sizes, governance structures, type of incentive, and administrative efficiency (Zwick & Mahon, 2017; OECD, 2022; Abramovsky et al., 2018).

These variations highlight the importance of a sector-specific investigation, as generalisations from other contexts may not reflect realities in Nigerian consumer goods firms. ROA, in particular, is widely used in both emerging and developed economies as a measure of operational efficiency and investment effectiveness (Rosikah et al., 2018), yet many previous studies focus on ROE, net profit margins, or descriptive growth metrics (Khrawish, 2011; Guo & Xu, 2021; Piotroski, 2000). A focus on ROA ensures consistency and provides a meaningful measure of how annual allowance impacts a firm's financial performance.

However, tax-incentive schemes, including capital allowances and annual allowances, may lose effectiveness when tax administration capacity is weak, when governance is opaque, or when implementation is inconsistent (Abramovsky et al., 2018; Umar & Tusubira, 2017).

2.5 Empirical Evidence in Nigeria

Empirical evidence from Nigeria is mixed and inconclusive. While some studies report positive effects of tax incentives on firm performance, others find weak or insignificant relationships. This suggests that the impact of such incentives is context dependent. Edori and Des Wosu (2024), Salaudeen and Alhassan (2023), and Omesi and Maccarthy (2022) documented improved performance among MSMEs, agricultural firms, and consumer goods manufacturers, respectively.

In addition, Alhassan and Salaudeen (2022) and Salaudeen et al. (2023) reported that tax holidays and investment allowances stimulated firm growth. In contrast, Nnah (2024) found no significant effect of capital allowance on return on equity or net profit margin. Similarly, Mauda and Saidu (2019) and Etim et al. (2024) showed that although some incentives enhanced profitability, investment allowance often had no significant impact. Tsegba et al. (2021) further reported that while tax exempt income improved investment performance, loss relief reduced return on investment.

This indicates that certain incentives may even produce adverse outcomes. These divergent findings suggest that the effectiveness of tax incentives varies

across incentive types, sectors, and firm characteristics. Differences in performance measures, model specification, and research methods also contribute to inconsistent results. Moreover, most studies treat capital allowance as a single construct.

This approach masks the distinct effects of its components. Consequently, the specific impact of annual allowance remains unclear. By isolating annual allowance and examining its effect on return on assets in listed consumer goods manufacturing firms, this study provides more precise evidence on the performance implications of depreciation-based incentives in Nigeria's consumer goods sector.

2.6 Identified Research Gaps

Despite extensive research, three main gaps remain:

1. Limited sector-specific evidence in Nigeria: Most studies focus on agriculture, MSMEs, or broad industry aggregates rather than consumer goods manufacturing.
2. Inconsistent methodologies and measures: Many Nigerian studies rely on surveys or descriptive statistics, with limited use of panel data regression to isolate incentive effects.
3. Limited firm-level evidence linking annual allowance to operational efficiency: While recent global literature suggests that tax incentives can enhance investment and firm performance, there is limited Nigerian evidence that directly examines the impact of annual allowance on asset-based performance measures such as return on assets (ROA).

This study addresses these gaps by examining the effect of annual allowance on ROA among listed consumer goods manufacturing firms in Nigeria, using panel data analysis to provide robust, sector-specific evidence.

III. METHODOLOGY AND METHODS

3.1 Data

This study adopted an ex post facto research design, relying on secondary panel data to examine the incentive effect of annual allowance on return on assets (ROA) among listed consumer goods

manufacturing companies in Nigeria. The design is appropriate because the study analyses historical financial and tax information over which the researcher has no control.

The population of the study comprises all twenty-one (21) consumer goods manufacturing companies listed on the Nigerian Stock Exchange (NSE) during the period 2017–2024. A convenience sampling technique was employed to select ten (10) firms based on the availability of complete and consistent data for all variables across the study period. Several listed firms were excluded due to missing or incomplete disclosures relating to capital allowances in their annual reports.

The final sample consists of the following firms:

1. Ekocorp PLC
2. Glaxo SmithKline Consumer Nigeria PLC
3. May & Baker Nigeria PLC
4. Dangote Sugar Refinery PLC
5. Evans Medical PLC
6. Fidson Healthcare PLC
7. Morrison Industrial PLC
8. Pharma-Deko PLC
9. Neimeth International Pharmaceuticals PLC
10. Dangote Cement PLC

The resulting dataset forms a balanced panel of 80 firm-year observations. Data were sourced from the published annual reports and audited financial statements of the sampled firms. Tax-related information was obtained from the notes to the accounts, particularly disclosures on capital allowances. Financial performance data were extracted from the statements of profit and loss and financial position.

3.2 Variable Definition and Measurement

The study employs one dependent variable and one explanatory variable.

Return on Assets (ROA) is used as the dependent variable to measure financial performance.

ROA captures managerial efficiency by indicating how effectively a firm utilizes its asset base to generate earnings. It is measured as profit after tax divided by total assets. ROA is preferred because it reflects internal operational performance and is less

affected by stock market volatility, which is particularly relevant in emerging economies such as Nigeria. ROA captures the efficiency with which firms convert invested assets into earnings. It is a widely used measure of operational efficiency and asset utilisation in firm-level studies, particularly in capital-intensive manufacturing sectors (Edori & Des-Wosu, 2024; Essiet & Paago, 2024).

The key explanatory variable is Annual Allowance (ANALL), which represents a depreciation-based tax incentive under Nigeria’s Companies Income Tax Act (CITA). Annual allowance refers to the portion of qualifying capital expenditure that firms are permitted to deduct annually from taxable income. In this study, ANALL is measured as the monetary value of annual capital allowance claimed by each firm in a given year, as disclosed in the firms’ audited financial statements. Annual allowance is selected because it is a recurring tax incentive.

It also influences capital accumulation, asset replacement, and production efficiency, which are closely linked to returns on assets. Focusing solely on ANALL allows the study to isolate the specific incentive effect of depreciation-based allowances on asset utilization and financial performance. This approach avoids conflating the effect with other tax provisions that operate through different mechanisms (Gitonga et al., 2023; Peng et al., 2023).

The selection of ROA as the dependent variable and ANALL as the explanatory variable is grounded in both theory and empirical practice. ROA reflects managerial efficiency and asset utilization, while ANALL represents a measurable, recurring depreciation-based tax incentive directly affecting capital investment decisions. This focused specification ensures that the study isolates the effect of annual allowance on firm performance.

Table 1: A summary of the Study Variables

Variable	Abbreviation	Measurement	Data Sources
Explained variable	ROA	Profit After Tax / Total Assets	Annual reports
Return on	on	(%)	

Assets			
Explanatory variable	ANALL	Value of annual capital allowance claimed in year t (₹)	Annual reports and tax notes
Annual Allowance (Tax Incentive)			

characteristics. Using panel data with Random Effects estimation helps control for unobserved, time-invariant firm-specific heterogeneity. Focusing on a single industry with similar regulatory and operating conditions further reduces cross-sectional variation and potential omitted variable bias. Model adequacy is further supported by post-estimation indicators.

3.3 Model Specification and Estimation Technique

Panel data regression analysis was employed to examine the incentive effect of annual allowance on return on assets across the sampled firms over the period 2017–2024. Panel estimation is appropriate as it accounts for both cross-sectional and time-series variations in the data and controls for unobserved firm-specific heterogeneity.

Both fixed effects (FE) and random effects (RE) models were initially estimated. The Hausman specification test was then applied to determine the appropriate estimation technique. The test result failed to reject the null hypothesis that the random effects estimator is consistent and efficient. Therefore, the random effects model was adopted for hypothesis testing.

The regression model for the study is specified as:

$$ROA_{it} = \beta_0 + \beta_1 ANALL_{it} + \mu_i + \varepsilon_{it}$$

Where:

ROA_{it} = Return on assets of firm i in year t

ANALL_{it} = Annual allowance (tax incentive) of firm i in year t

β₀ = Intercept

β₁ = Coefficient measuring the effect of annual allowance on ROA

μ_i = Unobserved firm-specific effect

ε_{it} = Error term

Given the balanced panel, limited number of firms, and a parsimonious model with a single explanatory variable, extensive diagnostic testing was not the primary focus. The model is theoretically grounded to isolate the effect of ANALL on ROA.

Firm performance may also be influenced by factors such as size, leverage, and governance

In particular, the Durbin–Watson statistic shows no evidence of first-order autocorrelation in the residuals. Overall, these considerations support the reliability of the estimated relationship between ANALL and firm performance, while transparently acknowledging the study’s scope and limitations.

IV. EMPIRICAL RESULTS AND DISCUSSION

4.1 Analysis of Descriptive Statistics

The descriptive statistics in Table 2 show that return on assets (ROA) has a mean value of 21.8462% with a standard deviation of 13.1983 percentage points. This implies a moderate variation in financial performance among the sampled firms. Annual allowance (ANALL) records a mean value of 3016.0380 and a relatively high standard deviation of 1829.0650. This reflects substantial differences in capital investment and depreciation claims across firms. This dispersion is consistent with variations in firm size and asset intensity within the consumer goods manufacturing sector and provides sufficient variability to examine the relationship between ANALL and ROA.

The skewness coefficient, which is a measure of the departure of a distribution from symmetry presented in table 2, shows that all study variables are positively skewed (ROA = 0.6428; ANALL = 0.7419). This indicates longer right tails in their distributions, with relatively fewer high-value observations extending beyond the mean.

The kurtosis values (ROA = 1.7292; ANALL = 2.4158) exceed one.

This result shows that leptokurtic distributions are characterised by a higher concentration of observations around the mean and heavier tails. This

indicates that the data are slightly more peaked than a normal distribution. The Jarque-Bera test further confirms that the data deviate from normality ($p < 0.050$). Such distributional patterns indicate variability and asymmetry common in firm-level financial and tax data. These patterns do not compromise the validity of subsequent econometric analysis. Particularly when using panel regression techniques that are robust to non-normality.

Table 2: Descriptive Statistics of the Variables

Statistic	ROA	ANALL
Mean	21.8462	3016.0380
Median	16.0000	2621.0000
Maximum	44.0000	6977.0000
Minimum	-8.0000	1001.0000
Std. Dev.	13.1983	1829.0650
Skewness	0.6428	0.7419
Kurtosis	1.7292	2.4158
Jarque-Bera	8.8496	6.8869
Probability	0.0120	0.0320
Sum	1420.0000	196042.5000
Sum Sq. Dev.	11148.4600	2.14E+08
Observations	80	80

Source: Researchers' Statistical Computation from EViews (v.10), 2025

4.2 Unit Root Test

Non-stationary data produces spurious regression results; therefore, it is essential to establish the stationarity of the data before conducting panel regression analysis. Stationarity was tested using the Levin, Lin & Chu t^* test at a 5% significance level.

Table 3 presents the results of the stationarity test for all study variables at level. The results show that both ROA and ANALL are stationary at level I (0), as indicated by significant p-values ($p < 0.050$). Specifically, the null hypothesis of a unit root is rejected for both variables. This confirms that the series is stationary.

These results imply that the panel data is suitable for regression analysis. The variables are consistent and reliable for evaluating the effect of ANALL on ROA among listed consumer goods manufacturing companies in Nigeria.

Table 3: Summary of Levin, Lin & Chu t^* Unit Root

Variables	Levin, Lin & Chu t^*	Probability	Order of Integration
ROA	-3.0665	0.0089	1(0)
ANALL	-2.7010	0.0035	1(0)

Source: EViews Output, 2025

4.3 Hausman Test for Model Selection

To determine whether a fixed effects (FE) or random effects (RE) model is more appropriate for estimating the effect of annual allowance (ANALL) on ROA, the Hausman test was conducted. The null hypothesis assumes that the random effects model is consistent and efficient, while the fixed effects model is more appropriate. The Hausman test in Table 4 yields a p-value of 0.5816, which is greater than the 5% significance level. Therefore, we fail to reject the null hypothesis and conclude that the random effects model is more appropriate for this analysis. The coefficient comparison in Table 5 shows that the differences between the fixed and random effects estimates are small and statistically insignificant. This further confirms that the random effects specification is suitable for the panel data.

The use of the random effects model allows us to account for individual firm heterogeneity while maintaining efficiency in the coefficient estimates. Subsequent regression analysis of ANALL on ROA will therefore be based on the random effects estimator.

Table 4: Hausman Test for Model Selection (ROA)

Test Statistic	Chi-Sq.	Df	Prob.
Cross-section			
random	1.0839	1	0.5816

Source: EViews Output, 2025

Table 5: Comparison of Fixed and Random Effects Coefficients for ANALL

Variable	Random		Prob.
	Fixed	Var(Diff.)	
ANALL	-0.0137	-0.0134	0.000001

Source: EViews Output, 2025

4.4 Regression Analysis of ROA

Dependent Variable: ROA
 Method: Panel EG1S (Cross-section random effects)
 Date: 05/08/25 Time: 22:21
 Sample: 2017 2024
 Periods included: 10
 Cross-sections included: 10
 Total panel (balanced) observations: 80

Table 6 presents the results of the panel regression analysis examining the effect of annual allowance (ANALL) on return on assets (ROA) of listed consumer goods manufacturing companies in Nigeria, using the random effects estimator.

The coefficient of ANALL is positive and statistically significant ($\beta = 0.0015$, $t = 2.7111$, $p = 0.0088$). This indicates that ANALL exerts a significant incentive effect on ROA among listed consumer goods manufacturing companies in Nigeria during the period. This suggests that higher capital tax relief through annual allowance has a positive effect on asset utilization and profitability among the sampled firms.

The model explains a substantial proportion of the variation in ROA, with an R-squared value of 0.8972. This shows that variations in annual allowance account for a large share of the observed differences in ROA within the panel. The remaining variation may be attributed to firm-specific and macroeconomic factors not included in the model.

The F-statistic (7.3481, $p < 0.050$) confirms that the model is statistically significant overall. The Durbin-Watson statistic of 2.1331 suggests the absence of the first-order autocorrelation in the residuals, indicating that the regression estimates are reliable.

Generally, the results provide empirical evidence that annual allowance plays a meaningful role. It explains financial performance efficiency, as measured by ROA, among listed consumer goods manufacturing companies in Nigeria.

Table 6: Swamy and Arora Estimator of Component Variances (Random Effects Model)

Panel A: Coefficient Estimates				
Variab le	Coeffi cient	Std. Error	t-Statistic	Prob.
ANALL	0.0015			
L	5	0.0006	2.7111	0.0088
C	72	6.4709	2.6746	0.0097

Panel B: Effects Specification			
	S.D	Rho	
Effects	.		
Cross-section random	1.1964	0.0710	
Idiosyncratic random	4.3291	0.9290	

Panel C: Weighted Statistics			
Statistic	Value	Statistic	Value
R-squared	0.8972	Mean dependent var	21.8462
Adjusted R-squared	0.8845	S.D. dependent var	13.1983
S.E. of regression	4.4848	Sum squared resid	1146.4480
F-statistic	7.3481	Durbin-Watson stat	2.1331
Prob.(F-statistic)	0.0000		

Panel D: Unweighted Statistics			
Statistic	Value	Statistic	Value
R-squared	0.8971	Mean dependent var	21.6830
Sum squared resid	1154.428	Durbin-Watson stat	2.1774
	0		

Source: Eviews Output, 2025

4.5 Test of Hypothesis

H01: Annual allowance has no significant effect on return on assets of listed consumer goods manufacturing companies in Nigeria.

As shown in Table 7, the coefficient of annual allowance is positive (0.0015) and statistically significant, with a t-statistic of 2.7111 and a probability value of 0.0088, which is below the 5% significance level. Therefore, the null hypothesis is rejected.

This result indicates that annual allowance has a statistically significant incentive effect on return on assets of listed consumer goods manufacturing companies in Nigeria during the study period.

Table 7: Effect of Annual Allowance on Return on Assets (ROA)

Variable	Coefficient	t-statistic	p-value	Sig. level
ANALL	0.0015	2.7111	0.0088	0.0500

Model Statistics: $R^2 = 0.8972$ Adj. $R^2 = 0.8845$
 Durbin-Watson = 2.1331
 Sources: Eviews Output, 2025

4.6. DISCUSSION OF FINDINGS

The study reveals a positive and significant effect of annual allowance on ROA. This implies that annual allowance plays a critical role in enhancing the financial performance of consumer goods manufacturing companies in Nigeria. By allowing firms to deduct depreciation from taxable income, annual allowance provides a consistent, long-term tax benefit that encourages investment in productive capital assets. This finding aligns with Essiet and Paago (2024) and Edori and Des-Wosu (2024), who reported a strong positive relationship between capital allowance and firm financial performance. Similarly, the finding agrees with the study by Omesi and Maccarthy (2022), which found that the annual allowance is positively and significantly correlated with ROA among list consumer goods.

The findings imply that annual allowance reduces firms' effective tax burden, thereby freeing internal funds for reinvestment in machinery, equipment, and production infrastructure. Over time, this process enhances operational efficiency and asset utilisation, which directly improves ROA. In capital-intensive sectors such as consumer goods manufacturing, systematic depreciation allowances enable firms to manage asset lifecycles, sustain production capacity, and generate higher returns from invested capital.

International evidence further reinforces this relationship between tax incentives and firm performance. Na et al. (2021) demonstrate that tax benefits are significantly associated with improvements in core profitability indicators such as ROA and ROE. This suggests that well-designed incentives enhance asset productivity and operational efficiency. Likewise, Peng et al. (2023) shows that an accelerated-depreciation incentive improves firm value, capital efficiency, and productivity. Such incentives lower the effective cost of capital and stimulate asset investment.

Taken together, the findings of this study and the supporting empirical literature suggest that the effectiveness of annual allowance is likely to be stronger in firms with sound financial management and investment planning systems. As such, firms are better positioned to strategically allocate capital expenditure and fully utilise available tax benefits.

Conversely, firms with weaker governance structures or inefficient investment planning may experience diminished benefits despite qualifying for the same incentive. Overall, the results confirm that annual allowance is an effective fiscal tool for improving operational efficiency and financial performance. However, its impact may vary according to firm-level capacity and the broader institutional environment.

V. CONCLUSION, IMPLICATIONS AND FUTURE RESEARCH

5.1 Conclusion

This study examined the effect of annual allowance as a tax incentive on the financial performance of listed consumer goods manufacturing companies in

Nigeria. The empirical findings reveal that annual allowance has a positive and statistically significant effect on return on assets (ROA). This indicates that depreciation-based tax incentives enhance firms' asset utilisation and operational efficiency. By reducing taxable income and supporting sustained investment in productive assets, annual allowance contributes to improved financial performance. The study provides firm-level evidence on the role of specific tax incentives in shaping performance outcomes in an emerging economy context.

5.2 Practical and Policy Implications

The findings have several implications for policymakers and regulatory authorities:

1. Maintain stable annual allowance policies: Predictable annual allowance provisions should be sustained, as they enhance asset utilisation and improve ROA in capital-intensive manufacturing firms.
2. Improve clarity in tax administration: Simplifying capital allowance rules and providing clear guidance on qualifying assets can help firms fully utilise annual allowance benefits.
3. Strengthen taxpayer education and support: Targeted tax education by authorities can improve firms' ability to apply annual allowance effectively in investment planning.
4. Integrate tax planning with investment decisions: Firms should align capital expenditure decisions with annual allowance provisions to maximise returns on assets.

5.3 Limitations of the Study

While the study provides valuable evidence, several limitations must be acknowledged:

1. Single incentive variable: Only annual allowance was examined. Other incentives (investment allowance, rural investment allowance, pioneer status, etc.) were not included.
2. Sample size and sampling approach: Although 21 listed firms were available, only 10 firms met the data availability criteria. This convenience-based reduction limits the generalizability of the findings.
3. Scope of performance indicators: The study focused only on ROA; other financial performance measures such as ROE, profit margin, and Tobin's Q were not analysed.

4. Context-specific findings: Results apply specifically to listed consumer goods manufacturing companies in Nigeria and may not reflect outcomes in other industries or countries.

5.4 Directions for Future Research

To build on the findings, future studies can explore the following:

1. Examine multiple tax incentives simultaneously to compare the relative effects of annual allowance with other incentive instruments.
2. Incorporate additional measures of firm performance, such as profitability ratios, market-based indicators, and productivity metrics.
3. Expand the sample size across industries or include unlisted firms to enhance external validity.
4. Assess the post-reform environment following the 2026 shift to the straight-line capital allowance system, comparing pre- and post-reform incentive effects.
5. Consider moderating firm-level characteristics such as firm size, leverage, asset intensity, governance quality, or tax compliance behaviour to better understand how the effects of annual allowance vary across firms.

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