IJAAR PUBLISHING®

West African Journal of Interdisciplinary Research | ISSN: 3027-1878
Volume 3, Issue 4 (2025) | www.ijaar.org

GROWTH INDICATORS AND RETAINED EARNINGS OF QUOTED FOOD AND BEVERAGES FIRMS IN NIGERIA

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ABSTRACT

This study assessed effect of growth indicators on retained earnings of quoted food and beverages firms in Nigeria. The specific objectives were to ascertain the effect of firm size, examine the impact of sales turnover, and determine the influence of dividend payout ratio on the retained earnings of these firms. The study adopted an ex-post-facto research design, utilizing secondary data obtained from the published financial reports of five purposively selected food and beverage firms in Nigeria for the period covering 2009 to 2024. The analysis was carried out using Panel Least Squares (PLS) regression. The empirical results revealed that sales turnover had a positive and statistically significant effect on retained earnings, with a t-statistic of 3.0652 and a p-value of 0.0032. Firm size also exhibited a positive relationship with retained earnings, although the effect was not statistically significant, with a t-statistic of 1.1914 and a p-value of 0.2378. Dividend payout ratio, on the other hand, showed a negative and nonsignificant influence on retained earnings, with a t-statistic of -0.8538 and a p-value of 0.3963. The model demonstrated moderate explanatory power, with an R-squared value of 0.6253, indicating that approximately 63% of the variation in retained earnings among the sampled firms is explained by the selected growth indicators. These findings suggest that revenue-generating capabilities, as represented by sales turnover, are key drivers of earnings retention in the food and beverage sector, while dividend policy decisions may not have a direct or significant impact. The study recommends that firms prioritize strategies that expand turnover and asset base, while adopting balanced dividend policies that support both shareholder interests and long-term reinvestment goals. In conclusion, internal financing through retained earnings can be enhanced by focusing on growth-oriented operational metrics, thereby strengthening financial sustainability in Nigeria's manufacturing sector.

Keywords: *Growth Indicators, Retained Earnings, Firm Size, Sales Turnover, Dividend Payout Ratio, Food and Beverage Firms*

Olorunmola, E. G. & Okwo, I. M. (2025). Growth Indicators and Retained Earnings of Quoted Food and Beverages Firms in Nigeria. *West African Journal of Interdisciplinary Research. 3*(4), 1-19. DOI: https://doi.org/10.5281/zenodo.17450798

1.0 INTRODUCTION

1.1 Background of the Study

Businesses worldwide pursue growth not only to survive but also to thrive in competitive markets. Although the concept of growth varies among organizations, it fundamentally represents progress toward achieving strategic goals. Growth is often measured by financial indicators such as turnover and firm size, which reflect a company's capacity to expand and sustain its operations (Agyapong et al., 2023). For firms in the food and beverage sector, especially in Nigeria, these indicators are vital to understanding their development and financial health.

Retained earnings play a crucial role in financing growth. As a key source of internal funds, retained earnings reflect a firm's ability to reinvest profits and support long-term sustainability. In Nigeria's quoted food and beverage sector, which includes major players like Nestle Nigeria Plc, Nigerian Breweries and Cadbury retained earnings are particularly strategic given the sector's significant contribution to employment, GDP, and food security (Mwangi & Waweru, 2022).

Among growth indicators, firm size, turnover, and dividend payout ratio are critical factors influencing retained earnings. Firm size, often measured by total assets, signifies the scale and operational capacity of a company, impacting its ability to generate and retain earnings. Turnover reflects revenue performance and market demand, which directly affects profitability and retained earnings capacity. Dividend payout ratio indicates the proportion of profits distributed to shareholders versus those retained for reinvestment, making it a direct determinant of retained earnings levels.

Empirical studies emphasize these relationships. For instance, Ijeoma (2021) found that turnover and total assets significantly affect financial performance in Nigerian food and beverage firms, underscoring their importance in retained earnings dynamics. Similarly, Nwankwo and Asogwa (2023) highlighted the influence of profitability and dividend policies on earnings retention, particularly among top firms like Nestle and Guinness.

The specific impact of dividend payout ratio on retained earnings is also critical, as it reflects management decisions regarding profit distribution and reinvestment priorities. Oketah and Ekweronu (2018) observed that while net profit margin influences retained earnings, dividend policies significantly shape retention in Nigerian manufacturing firms.

Despite existing research, there remain divergent findings on how these growth indicators interrelate with retained earnings, especially within the unique financial landscape of Nigeria's food and beverage industry, which faces high operating costs, seasonal demand fluctuations, and regulatory pressures. This highlights the need for a focused empirical assessment of the effect of firm size, turnover and dividend payout ratio on retained earnings in this sector.

Therefore, this study seeks to provide an empirical evaluation of the effect of these specific growth indicators on retained earnings of quoted food and beverage firms in Nigeria, contributing to both academic knowledge and practical financial management strategies.

1.2 Statement of the Problem

In corporate finance, retained earnings is an essential form of internal financing which are expected to correspond closely with key growth indicators that reflect a firm's operational capacity and financial decisions. Among these, firm size, turnover, and dividend payout ratio

play crucial roles in shaping the level of profits retained for reinvestment and long-term sustainability. For quoted food and beverage firms in Nigeria, where access to external capital is limited and reinvestment is critical for growth, understanding how these indicators relate to retained earnings is vital for strategic financial planning.

However, in the Nigerian context, the relationship between these growth indicators and retained earnings appears inconsistent and remains underexplored in empirical literature. For instance, several firms in the food and beverage sector report increases in turnover and expansions in firm size, yet do not show a corresponding rise in retained earnings. Similarly, dividend payout policies vary widely across firms, with some distributing large portions of earnings to shareholders despite facing substantial capital needs. These inconsistencies raise important questions about how firms manage earnings, make reinvestment decisions, and structure dividend policies.

The lack of empirical clarity on these relationships creates challenges for financial stakeholders. Investors, managers, and analysts who rely on these indicators to assess firm performance and future potential face uncertainty when growth metrics do not translate into higher retained earnings. This disconnect undermines the reliability of financial indicators as tools for valuation, planning, and performance measurement.

Moreover, as retained earnings constitute a primary source of funding in Nigeria's capital-constrained environment, any inefficiency or misalignment in how growth indicators influence earnings retention could lead to poor capital allocation, inconsistent dividend practices, and weakened investor confidence. Over time, this may limit firm-level expansion, reduce sectoral competitiveness and ultimately hinder the food and beverage sector's contribution to Nigeria's economic development.

This study, therefore, seeks to address this gap by empirically assessing the effect of firm size, turnover and dividend payout ratio on retained earnings of quoted food and beverage firms in Nigeria.

1.3 Objectives of the Study

The broad objective of the study is to assess the effect of growth indicators on retained earnings of quoted food and beverages firms in Nigeria. Other specific objectives of the study are to:

i. To ascertain the effect of firm size on retained earnings of quoted food and beverage firms in Nigeria.
ii. To examine the effect of turnover on retained earnings of quoted food and beverage firms in Nigeria.
iii. To investigate the effect of dividend payout ratio on retained earnings of quoted food and beverage firms in Nigeria.

1.4 Research Questions

The study provided answers to the following research questions.

i. How does firm size influence the retained earnings of quoted food and beverage firms in Nigeria?
ii. What is the effect of turnover affect the retained earnings of quoted food and beverage firms in Nigeria?
iii. To what extent does the dividend payout ratio impact on retained earnings of quoted food and beverage firms in Nigeria?

1.5 Statement of Hypotheses

The following hypotheses in null form (H_0) guided this study:

i. Firm size does not significantly affect the retained earnings of quoted food and beverage firms in Nigeria.
ii. Turnover does not significantly affect the retained earnings of quoted food and beverage firms in Nigeria.
iii. Dividend payout ratio does not significantly affect the retained earnings of quoted food and beverage firms in Nigeria.

1.6 Significance of the Study

This study holds significant value for a broad range of stakeholders who rely on sound financial analysis and corporate data to inform decision-making and policy development. They include:

i. **Corporate Managers and Financial Executives:** Managers in quoted food and beverage firms will benefit by gaining a deeper understanding of how specific growth indicators, such as turnover, asset expansion and profitability as it relate to retained earnings. This will enable them to align financial strategies with long-term business goals, especially in the areas of budgeting, capital allocation, and dividend decisions. The study can also assist in improving the design of internal performance monitoring systems.

ii. **Investors and Shareholders:** The study provides investors and shareholders with insight into the financial behaviors of listed food and beverage firms, particularly how these companies manage growth and earnings retention. Understanding these relationships can aid investors in making more informed decisions regarding equity valuation, risk assessment, and expected returns, especially in a market where transparency can often be limited.

iii. **Policy Makers and Government Agencies:** Government bodies such as the Ministry of Industry, Trade, and Investment, and regulatory authorities like the Central Bank of Nigeria (CBN) and the Federal Inland Revenue Service (FIRS), can draw on the study's findings to guide policy formulation. By understanding how growth and retained earnings interact in a key sector, they can promote tax, fiscal, or investment policies that support sustainable corporate growth.

iv. **Academic Researchers and Scholars:** This research contributes to existing literature by exploring a specific relationship that has received limited attention within the Nigerian context. Scholars in finance, accounting, and economics will find the results useful for comparative studies, theory development, and the identification of further research gaps in emerging markets.

1.7 Scope of the Study

This study covers a sixteen-year period, from 2009 to 2024, and focuses on five selected food and beverage firms quoted on the Nigerian Exchange Group (NGX). The selected firms are Cadbury Nigeria Plc, Flour Mills of Nigeria Plc, Nestle Nigeria Plc, Northern Nigeria Flour Mills Plc, and 7-Up Bottling Company Plc.

Geographically, the study is confined to Nigeria, with a focus on firms incorporated and operating within the Nigerian business environment. This restriction is necessary to account for Nigeria’s unique regulatory, economic, and financial conditions, which may influence how growth indicators affect retained earnings, and which may differ significantly from trends observed in other countries.

The study examines the effect of three key growth indicators (independent variables): Firm size (typically measured by total assets), Turnover (total revenue) and Dividend payout ratio (dividends paid as a proportion of net income) on retained earnings (the dependent variable) of quoted food and beverages firms in Nigeria. These variables were selected based on their theoretical relevance and prior empirical support in explaining earnings retention behavior. The study analyzes both the individual and combined effects of these variables on retained earnings using appropriate econometric tools, with the goal of establishing the nature, direction and statistical significance of the effects over the defined period.

2.0 REVIEW OF RELATED LITERATURE

2.1 Conceptual Review

2.1.1 Growth Indicators

Growth indicators are key financial metrics used to assess a firm's development, performance trajectory, and overall financial health. In the context of corporate finance and strategic management, these indicators help evaluate how effectively a firm is expanding, not just in terms of revenue or physical size, but also in its ability to generate sustainable value for shareholders and maintain financial stability over time.

The relevance of growth indicators lies in their ability to provide measurable insights into a company's progress. Internally, management uses these metrics to monitor performance, guide strategic planning, and optimize resource allocation. Externally, investors, analysts, and regulators rely on growth indicators to assess a firm's financial strength, growth potential, and risk profile. As Agyapong et al. (2023) note, growth indicators serve as a link between a firm's strategic objectives and its financial outcomes, making them essential tools for long-term performance evaluation.

The specific growth indicators relevant to a firm often depend on the industry and the economic environment in which it operates. In emerging markets like Nigeria, where firms face macroeconomic volatility, growth indicators are especially important for maintaining investor confidence and operational transparency. Sectors such as food and beverages characterized by high consumer demand and significant capital requirements need careful tracking of growth metrics to support expansion and sustainability (Okoye et al., 2023).

Importantly, growth indicators also influence a firm's capacity for internal financing. Retained earnings, the portion of net income not distributed as dividends, are often driven by growth-related factors. When firms demonstrate strong performance in key growth areas, they are more likely to retain earnings for reinvestment and future development. This relationship underscores the importance of analyzing how specific growth indicators affect earnings retention.

For the purpose of this study, three growth indicators are examined: Firm Size – typically measured by total assets, indicating the scale and operational capacity of a firm, Turnover - representing the total revenue generated, which reflects market performance and demand and Dividend Payout Ratio – measuring the proportion of earnings distributed as dividends, directly affecting the amount of profit retained within the firm. These indicators were selected based on their theoretical relevance and empirical significance in determining retained earnings, particularly in the food and beverage industry in Nigeria.

2.1.2 Firm Size

Firm size is a fundamental indicator in corporate finance, often used to assess a company's operational scale, resource capacity, and financial strength. It is commonly measured by total

assets, turnover, or number of employees, depending on the study context (Elsharkawy& Saleh, 2018). For this study, total assets are adopted as the primary measure, in line with common practice in financial performance analysis.

Larger firms typically enjoy advantages such as economies of scale, easier access to financing, and greater market presence, making them more capable of sustaining growth and retaining profits. In contrast, smaller firms may face limitations in resource availability and financial flexibility, which can affect their ability to retain earnings for reinvestment.

According to Egbunike and Okoye (2017), firm size significantly influences profitability and earnings retention, particularly in Nigeria's manufacturing sector. Larger firms are more likely to generate stable income and accumulate retained earnings due to their diversified operations and stronger financial base. Additionally, firm size affects financial reporting practices, with larger companies more likely to comply with regulatory standards and provide transparent disclosures (Omodero & Ihenyen, 2020), which can further impact earnings management decisions.

In the context of Nigeria's food and beverage industry, firm size plays a strategic role in determining how profits are allocated between dividends and reinvestment. Understanding this relationship is essential for assessing the internal financing capacity of firms and their long-term sustainability.

2.1.3 Turnover

Turnover refers to the total revenue a firm generates from its primary business activities within a given period, typically a fiscal year. It reflects a firm's capacity to convert its products or services into cash inflows, making it a vital indicator of operational performance and market demand (Akpan & Ugwu, 2018).

In financial analysis, turnover serves as a core metric for evaluating business viability and growth potential. A high turnover generally indicates strong market acceptance and effective sales strategies, while a low turnover may suggest limited demand or operational inefficiencies. According to Okoro and Ezeani (2022), turnover is not only a measure of revenue generation but also forms the basis for assessing broader financial health through metrics such as profit margins and return on sales.

From a strategic standpoint, firms use turnover trends to evaluate the success of marketing initiatives, pricing strategies, and customer engagement efforts. In the food and beverage sector, where consumer demand can be highly elastic, turnover is particularly significant in signaling a firm's ability to scale and retain market share.

Importantly, Turnover influences retained earnings, as increased revenue enhances the potential for higher net income provided cost control is effective which can subsequently be retained within the firm. As such, consistent growth in turnover strengthens a company's internal financing capacity, supports reinvestment, and enhances long-term sustainability.

2.1.4 Dividend Payout Ratio

The dividend payout ratio measures the proportion of a company's net earnings distributed to shareholders as dividends, usually expressed as a percentage. It reflects a firm's dividend policy and its approach to balancing shareholder returns with internal financing needs (Salawu & Agboola, 2017). A high payout ratio may suggest limited reinvestment plans, while a low payout ratio typically indicates a strategy focused on retaining earnings for business expansion.

This ratio is particularly relevant in evaluating a firm's earnings retention behavior, as it directly determines how much profit is allocated to reinvestment versus distribution. In sectors like food and beverages, where capital investment and operational resilience are critical, firms often adjust dividend payouts to maintain financial flexibility.

According to Ugwoke and Ekwe (2019), dividend policy decisions must carefully balance the need to satisfy shareholder expectations with the necessity of preserving funds for operational growth and future obligations. In the Nigerian context, firms often face external pressures such as earnings volatility, inflation, and regulatory uncertainty that influence dividend decisions (Anigbogu & Nnadi, 2022).

For this study, the dividend payout ratio is considered a key growth indicator due to its inverse relationship with retained earnings. Firms that retain a larger portion of their earnings are better positioned to fund internal growth, reduce reliance on external financing, and strengthen long-term sustainability.

2.1.5 Retained Earnings

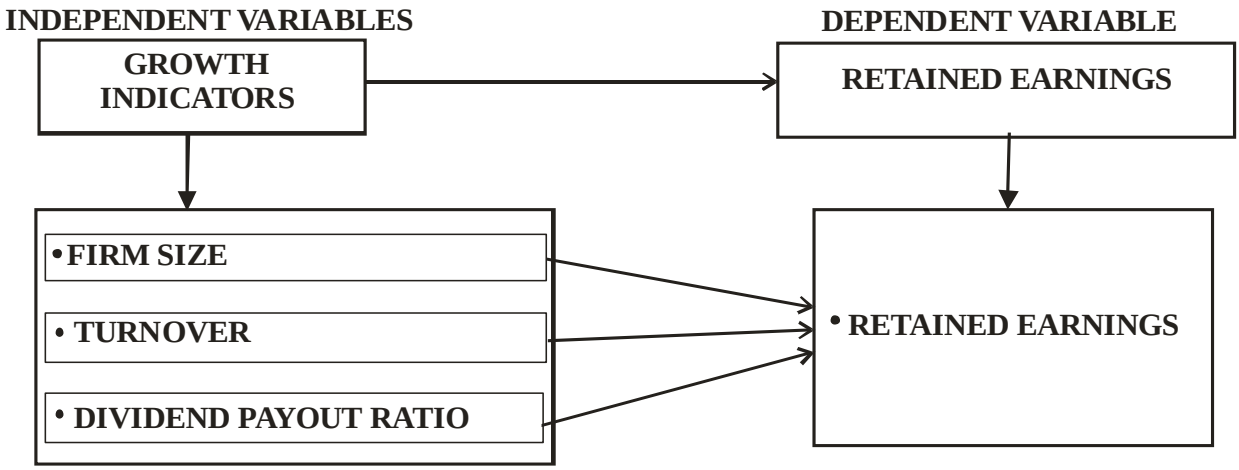
Retained earnings refer to the cumulative portion of a firm's net income that is not distributed as dividends but reinvested into the business. As a key component of shareholders' equity, retained earnings serve as an important source of internal financing for operational expansion, asset acquisition, or debt reduction (Emefiele & Anyaehie, 2018).

The level of retained earnings is influenced by profitability, dividend policy, and management's reinvestment priorities. Firms that consistently generate profits and adopt conservative dividend policies typically accumulate higher retained earnings, which enhances financial stability and supports long-term growth (Iloh & Ibe, 2019).

In capital structure decisions, retained earnings reduce dependence on external financing, lowering exposure to debt-related risks (Onwe & Chukwuani, 2022). This is particularly relevant in developing economies like Nigeria, where access to external capital is often constrained. Retained earnings provide a cost-effective alternative for funding strategic initiatives, thereby strengthening financial autonomy.

Additionally, retained earnings reflect a firm's ability to plan for the future and maintain resilience against market uncertainties. Investors and analysts often view strong retained earnings as a signal of prudent financial management and potential for value creation over time. In this study, retained earnings serve as the dependent variable, used to assess how selected growth indicators such as firm size, turnover and dividend payout ratio influence internal financing capacity in quoted food and beverage firms in Nigeria.

2.1.6 Conceptual Framework



Source: ***Authors Conceptualization, 2025***

Figure 2.1: Conceptual Framework on effect of Growth Indicators on Retained Earnings in Quoted Food and Beverage Firms in Nigeria

This conceptual framework illustrates the hypothesized effect of growth indicators on retained earnings in quoted food and beverage firms in Nigeria. Retained earnings are the dependent variable, representing the portion of net income reinvested in the firm rather than distributed as dividends. The independent variables, categorized as growth indicators, include: Firm Size, Turnover and Dividend Payout Ratio. These variables are expected to influence retained earnings based on the firm's financial structure, market conditions, and strategic management decisions. For instance: Firm size and turnover are expected to have a positive effect, as larger, high-revenue firms generally have greater capacity to generate and retain profits. Dividend payout ratio is anticipated to have a negative relationship, as higher distributions reduce the amount of earnings retained.

The arrows in the framework represent the directional (cause-effect) relationships between each independent variable and the dependent variable, forming the basis for the study's empirical investigation. This framework guides the analysis of how firm-level growth metrics affect earnings retention within Nigeria's food and beverage sector.

2.2 Theoretical Review

2.2.1 Life Cycle Theory

This study is anchored on the Life Cycle Theory of Firms. The theory of the corporate life cycle was propounded by Gort and Klepper in 1982. It provides a framework for understanding how firms evolve over time and how their financial strategies, including earnings retention, change across different stages. The Life Cycle Theory suggests that firms progress through five stages: introduction, growth, maturity, shakeout, and decline. Each stage is shaped by internal dynamics such as management strategy, financial capacity, and operational efficiency, as well as external factors like competition and macroeconomic conditions (Dickson, 2011).

In the introduction stage, firms are typically small, owner-managed, and operate with limited information and structure. Investment is cautious due to high uncertainty and unclear feedback from operations (Miller and Friesen, 1984). During the growth stage, firms begin to expand, driven by improved efficiency, competitive advantage, and rising demand.

Investments often include infrastructure, technology, and distribution systems (Spence, 1979; Jovanovic, 1982).

The maturity stage is characterized by investments yielding stable returns, with firms experiencing fewer structural changes. Profitability and cash flows are stronger, while business risks are relatively low (Nissim and Penman, 2001; Barclay and Smith, 2005). Following this, the shakeout stage occurs as competition intensifies. Firms that fail to adapt or restructure may face decline. Some convert unproductive assets into cash or seek mergers and acquisitions (Gort and Klepper, 1982).

Finally, in the decline stage, firms face limited growth, declining revenues, and outdated products. Financial risks increase, and profitability often deteriorates (Aharony and Yehuda, 2006; Livnat and Zarowin, 1990). The theory further suggests that a firm's financial behavior, including how much profit is retained versus distributed, depends on its stage in the life cycle. For instance, younger firms tend to retain earnings to fund growth, while mature firms, with fewer investment opportunities, are more likely to distribute dividends (DeAngelo et al., 2010; El-Ansary and Gomaa, 2012). In relation to this study, the Life Cycle Theory helps explain variations in retained earnings across firms based on their size, turnover and dividend policies. Firms in the growth or maturity phases may exhibit stronger earnings retention or dividend payout behavior, depending on their strategic focus and resource needs.

2.3 Empirical Review

2.3.1 Firm size and retained earnings

Ijeoma (2021) examined how firm growth indicators affect financial performance among four NSE-listed food and beverage companies from 2010 to 2019. Using panel regression analysis, the study found that total assets and turnover, core indicators of firm size, significantly and positively influenced retained earnings. This suggests that larger firms are more capable of generating surplus revenue and retaining profits for internal financing, due to better economies of scale, operational efficiency, and access to strategic market resources.

Onyebuchi (2024) examined the influence of equity structure on financial performance in listed food and beverage firms in Nigeria using data from 2014 to 2023. Employing panel least squares regression, the study discovered that retained earnings had a negative and significant effect on earnings per share (EPS). The findings suggest that while larger firms retain more earnings, such retention may reduce short-term profitability metrics, possibly due to reinvestment strategies or cautious dividend distribution practices.

Noke, Inyiama, and Udeh (2024) evaluated the effect of firm size on cash holdings among food and beverage firms in Nigeria using generalized method of moments (GMM) estimation on 2008–2017 panel data. The study found that firm size, measured by total assets, had a significant negative impact on cash holdings. This suggests that larger firms tend to allocate financial resources to fixed assets or long-term investments rather than holding excess liquidity, indirectly affecting how earnings are retained.

Ogunleye and Adeleye (2024) assessed how corporate governance structures impact the financial performance of Nigerian manufacturing firms. Applying a random-effects panel regression on data from 39 listed firms between 2003 and 2022, the study found that board independence, audit committee size, and managerial ownership significantly affect profitability (measured by ROA) and market valuation (Tobin's Q). The study underscores that effective governance mechanisms not only improve firm transparency but also indirectly influence earnings retention and reinvestment decisions by ensuring managerial discipline and financial prudence.

2.3.2 Turnover and Retained Earnings

Amadi and Obasi (2022) examined Brand Price Positioning Strategy and Sales Turnover of Food and Beverage Manufacturing Companies in Rivers State, Nigeria. The study evaluated the impact of pricing strategies on sales turnover across 106 small and medium enterprises. The study used descriptive statistics and Pearson correlation to determine the relationship. Findings showed that brand price positioning significantly influenced sales turnover, explaining 37.5% of its variation. This suggests that turnover improvements driven by pricing strategies can positively affect retained earnings.

Ebirien and Ohaka (2020) on a research captioned Profitability of Listed Food and Beverage Firms in Nigeria: Inventory Flow Management Impact Analysis evaluated the influence of economic order quantity (EOQ) on return on assets (ROA) across listed food and beverage companies between 2013 and 2017. Regression analysis revealed EOQ accounted for 33.1% of ROA variation, highlighting that efficient inventory turnover enhances profitability. The study emphasized that effective stock management improves sales turnover, which, in turn, supports the accumulation of retained earnings and boosts financial sustainability.

Ogunmakin, Olawale, and Ogundipe (2024) did a study on Retained Earnings and Financial Performance of Quoted Firms in Nigeria: An Empirical Analysis. The research studied whether retained earnings affect return on assets (ROA) using FMOLS and Granger causality tests on data from 10 manufacturing firms (2019–2023). While no direct relationship was found, retained earnings were shown to Granger-cause firm growth. This suggests that consistent turnover resulting in retained earnings can support future performance, even if its effects are lagged or indirect within quoted food and beverage firms in Nigeria.

2.3.3 Dividend payout ratio and retained earnings

Akani and James (2023) evaluated dividend payout decisions and profitability among ten quoted Nigerian food and beverage manufacturing firms from 2010 to 2019. Using panel fixed-effects regression with ROE as the dependent variable, they examined dividend payout ratio, retained earnings, dividend yield, and dividend per share. The study found both payout ratio and retained earnings positively and significantly impacted ROE, explaining 77% of its variation, indicating balanced dividend policies can improve profitability and maintain adequate reinvestment funds.

Nnah (2024) examined six Nigerian consumer goods firms over 2015–2019 using multiple regression in SPSS to explore dividend payout ratio, dividend yield, and stability ratio effects on ROE. Findings revealed a negative and significant relationship between dividend payout ratio and ROE, while dividend yield positively influenced ROE. This suggests that excessive dividend payouts may reduce retained earnings necessary for reinvestment, negatively impacting firm profitability in the long term.

Inyang, Goodwill, and Inah (2020) focused on Nigeria Breweries Plc from 2011 to 2019 using OLS regression to assess dividend payout ratio and earnings per share effects on retained earnings. The study concluded that neither payout ratio nor EPS significantly influenced retained earnings, although EPS correlated positively. This highlights that retained earnings dynamics in individual firms like Nigeria Breweries may depend on other factors beyond dividend payout and earnings alone.

2.4 Gap in Empirical Review

Despite existing research on growth indicators and retained earnings in Nigeria, few studies focus specifically on quoted food and beverage firms, a sector with unique financial dynamics like seasonal demand and high working capital requirements. Most prior studies

take a broad view of manufacturing or consumer goods, which masks these industry-specific features.

Additionally, growth indicators such as firm size, turnover, and dividend payout ratio are often analyzed in isolation, rather than within a unified framework assessing their combined influence on retained earnings. Many studies also suffer from short timeframes and lack theoretical grounding. This study addresses these gaps by focusing on the food and beverage sector, integrating key growth indicators, and employing a longer timeframe within a robust theoretical context.

3.0 METHODOLOGY

3.1 Research Design

This study adopted an *ex-post facto* research design. The *ex-post facto* approach was appropriate because the data were sourced from past financial records and events that could not be manipulated. The study employed Panel Least Square Regression Method.

3.2 Area of the Study

The study was carried out in Nigeria, with particular reference to selected food and beverage firms in Nigeria manufacturing industry that are listed on the Nigerian Exchange Group (NGX). The choice of this sector was as a result of its notable different activities towards the overall growth of the Nigerian economy.

3.3 Population of the Study

The population of the study consists of 8 food and beverage firms within Nigeria's manufacturing industry that are listed on the Nigerian Exchange Group (NGX) as of 2024.

3.4 Sample Size Determination

This study focuses on food and beverage firms within Nigeria's manufacturing industry that are listed on the Nigerian Exchange Group (NGX) as of 2024. From this population, the researcher employed convenience and judgmental sampling techniques to select five (5) firms for detailed analysis. The study is limited to quoted food and beverage firms in Nigeria, specifically those listed on the NGX during the study period. A purposive sampling technique was employed to select companies that consistently published audited annual financial statements from 2009 to 2024. This criterion ensures the availability of reliable and complete secondary data required for empirical analysis. The selected firms represent a proportion of the eligible population. The five selected companies are: Cadbury Nigeria Plc, Flour Mills of Nigeria Plc, Nestle Nigeria Plc, Northern Nigeria Flour Mills Plc and 7-Up Bottling Company Plc.

3.5 Sources of Data

The researcher utilized secondary data obtained from the annual reports and accounts of the sampled food and beverage firms listed on the Nigerian Exchange Group (NGX), as well as from the NGX database (Factbook) from 2009 to 2024. These data sources are considered credible, as the financial statements have been audited and filed with the Securities and Exchange Commission of Nigeria. Relevant documents are provided in Appendices.

3.6 Model Specification

The following regression model was adapted from the variables of the study:

$$LogRE_{it} = \beta_o + \beta_1 LogTA_{it} + \beta_2 LogTO_{it} + \beta_3 LogDPR_{it} + Ɛ_{it} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \text{(i)}$$

Where:

RE	=	Retained Earnings
Firm Size proxied by Total Assets (TA)	=	Firm Size
TO	=	Turnover
DPR	=	Dividend Payout Ratio
β_1,β_2,β_3	=	Coefficients of Independent Variable
β_o	=	Intercept or Constant
Ɛ	=	Error Term

3.7 Description of Variables in the Model

The variables in this study are grouped into dependent and independent variables. The dependent variable is retained earnings, while the independent variables, representing growth indicators, include firm size, turnover, and dividend payout ratio.

Type	Variable	Proxies	Symbol	Measurement	Source
Dependent Variable	Retained Earnings	Retained Earnings (RE)	RE	RE = Beginning Retained Earnings + Net Income – Dividends	Firm Annual Reports
Independent Variable	Firm Size	Total Assets	TA	Natural log of total assets	Firm Financial Statements; Ijeoma (2021)
Independent Variable	Turnover	Sales Revenue	TO	Total annual revenue from sales of goods/services	Annual Reports; Amadi&Obasi (2022)
Independent Variable	Dividend Payout Ratio	Dividend Payout Ratio	DPR	DPR = Dividends ÷ Net Income OR Dividends per Share ÷ Earnings per Share	Inyang et al. (2020); Financial Records

Source: Author's Compilation, 2025.

3.8 Method of Data Analysis

Panel data was employed as the study involved both time series and cross-sectional components. The time series aspect allowed for the analysis of changes in retained earnings and growth indicators over a 16-year period, while the cross-sectional dimension enabled comparisons among selected quoted food and beverage firms in Nigeria. This combined approach ensured a comprehensive evaluation of the effect of these specific growth indicators on retained earnings across time and firms.

3.9 Statement of Decision Rule

Reject the null hypothesis (H_0), if the p-value of the t-statistics is less than 0.05. Otherwise accept the null hypothesis and reject the alternate hypothesis.

4.0 DATA PRESENTATION AND ANALYSIS

4.1 Data Presentation and Data Analysis

Table 4.1: Regression Analysis Results – Industry Data

Dependent Variable: RE
Method: Panel Least Squares
Date: 08/29/25 Time: 11:40
Sample: 2009 2024
Periods included: 16
Cross-sections included: 5
Total panel (unbalanced) observations: 80

Variable	Coefficient	Std. Error	t-Statistic	Prob.
TA	0.353330	0.296556	1.191446	0.2378
TO	0.769013	0.250888	3.065161	0.0032
DPR	-0.200182	0.234454	-0.853821	0.3963
C	-1.972938	0.927972	-2.126074	0.0373

R-squared	0.625258	Mean dependent var	6.168976
Adjusted R-squared	0.602197	S.D. dependent var	0.887421
S.E. of regression	0.559711	Akaike info criterion	1.745957
Sum squared resid	20.36296	Schwarz criterion	1.906563
Log likelihood	-56.10848	Hannan-Quinn criter.	1.809752
F-statistic	27.11317	Durbin-Watson stat	1.609440
Prob(F-statistic)	0.000000		

Source: *Author's E-views Output, 2025.*

Table 4.1, the regression result revealed that the industry's retained earnings were influenced by total asset (firm size), turnover and dividend payout ratio. The extent of the influence exerted on retained earnings by total asset was insignificant and positive, turnover exerted a significant and positive effect, and dividend payout ratio exerted an insignificant and negative effect on retained earnings. This was evidenced as their p-Values of 0.2378, 0.0032, 0.3963 and 0.7093respectively are < 0.05 significant level. The Durbin Watson statistics shows that the series have no serial correlation. The adjusted R^2 was 0.602197 and this revealed that about 60 per cent of the variations in retained earnings could be explained by total asset (firm size), turnover and dividend payout ratio while 40 per cent could be explained by other factors.

4.2 Test of Hypotheses

4.2.1 Test of Hypothesis One

Restatement of the Hypothesis in Null and Alternate forms:

H_{01}: Firm size does not significantly affect the retained earnings of quoted food and beverage firms in Nigeria.

H_{11}: Firm size significantly affects the retained earnings of quoted food and beverage firms in Nigeria.

Decision Rule: Reject the null hypothesis (H_0) if the p-value of the t-statistic is less than 0.05. Otherwise, do not reject H_0.

Decision:
In the regression output (Table 4.1), firm size (proxied by total assets) has a coefficient of 0.3533, a t-statistic of 1.1914, and a p-value of 0.2378. Since the p-value is greater than 0.05, H_{01} is not rejected. This means that firm size does not have a statistically significant effect on retained earnings among quoted food and beverage firms in Nigeria during the study period.

Test of Hypothesis Two
Restatement of the Hypothesis in Null and Alternative Forms:
H_{02}: Turnover does not significantly affect the retained earnings of quoted food and beverage firms in Nigeria.
H_{12}: Turnover significantly affects the retained earnings of quoted food and beverage firms in Nigeria.

Decision Rule: Reject the null hypothesis (H_0) if the p-value of the t-statistic is less than 0.05. Otherwise, do not reject H_0.

Decision:
Turnover (TO) has a coefficient of 0.7690, a t-statistic of 3.0652, and a p-value of 0.0032. Since the p-value is less than 0.05, H_{02} is rejected. This indicates that turnover has a positive and statistically significant effect on retained earnings. Higher turnover contributes to greater revenue generation, supporting the firm's ability to retain earnings.

Test of Hypothesis Three
Restatement of the Hypothesis in Null and Alternative Forms:
H_{03}: Dividend payout ratio does not significantly affect the retained earnings of quoted food and beverage firms in Nigeria.
H_{13}: Dividend payout ratio significantly affects the retained earnings of quoted food and beverage firms in Nigeria.

Decision Rule: Reject the null hypothesis (H_0) if the p-value of the t-statistic is less than 0.05. Otherwise, do not reject H_0.

Decision:
Dividend payout ratio (DPR) has a coefficient of -0.2002, a t-statistic of -0.8538, and a p-value of 0.3963. Because the p-value is greater than 0.05, H_{03} is not rejected. This suggests that although the effect is negative, the dividend payout ratio does not significantly affect retained earnings in the sampled firms. The lack of significance may be due to varying dividend policies or other firm-specific financial strategies.

4.3 Discussion of Findings
The findings from this study contribute to the existing literature on factors affecting retained earnings in Nigeria. The discussion below aligns with the specific objectives set earlier, showing how the empirical results support or diverge from prior studies.

Objective One: To ascertain the effect of firm size on retained earnings of quoted food and beverage firms in Nigeria.
Firm size, proxied by Total Assets (TA), was tested for its influence on retained earnings (RE). The regression results revealed a positive but statistically insignificant relationship between firm size and retained earnings (coefficient = 0.3533, p = 0.2378). This implies that although larger firms tend to retain more earnings, the effect was not strong enough to be significant within the sampled firms during the study period. The model's overall fit (Adjusted R^2 = 0.6022) indicates that a substantial portion of variation in retained earnings is

explained by the included variables, yet firm size alone does not play a decisive role. This finding contrasts somewhat with studies like Ijeoma (2021), who found that firm size significantly and positively influenced retained earnings among NSE-listed food and beverage companies. The difference may be due to variations in sample size, time period, or industry-specific factors influencing financial policies.

Objective Two: To examine the effect of turnover on retained earnings of quoted food and beverage firms in Nigeria.

Turnover (TO) exhibited a positive and statistically significant impact on retained earnings (coefficient = 0.7690, p = 0.0032). This indicates that an increase in turnover is strongly associated with higher retained earnings, reflecting improved revenue generation and profitability among the sampled firms. The adjusted R^2 of 0.6022 shows that turnover, along with other variables, explains over 60% of the variations in retained earnings, demonstrating a robust model fit. This result aligns with the findings of Ebirien and Ohaka (2020), who reported that efficient turnover significantly enhances profitability in Nigerian food and beverage firms. It supports the notion that increased turnover activity leads to stronger internal financing capacity through retained earnings.

Objective Three: To investigate the effect of dividend payout ratio on retained earnings of quoted food and beverage firms in Nigeria.

The Dividend Payout Ratio (DPR) was found to have a negative but statistically insignificant effect on retained earnings (coefficient = -0.2002, p = 0.3963). This suggests that while higher dividend payouts may reduce the funds available for retention, this effect was not significant within the sampled firms. The negative relationship is consistent with the expectation that dividend payments reduce the amount of earnings a firm can retain for reinvestment. However, the lack of significance indicates that dividend policies in these firms may be influenced by other strategic considerations or that the firms balance payouts with earnings retention effectively. This finding resonates with the study by Ekiti and Olaniyan (2022), who also found a weak and non-significant relationship between retained earnings and dividend payments, highlighting the complex dynamics of dividend decisions in Nigerian firms.

5.0 SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Summary of Findings

The findings from the specific objectives of this study are summarized as follows:

i. Firm Size (proxied by Total Assets) was found to have a positive but statistically insignificant effect on the retained earnings of food and beverage firms in Nigeria. The coefficient of firm size was 0.3533 with a p-value of 0.2378, indicating that firm size does not significantly influence retained earnings within the sampled period.

ii. Turnover exhibited a positive and statistically significant effect on retained earnings. The coefficient for turnover was 0.7690 with a p-value of 0.0032, showing that increases in turnover significantly enhance the retained earnings of the food and beverage firms studied.

iii. Dividend Payout Ratio demonstrated a negative but statistically insignificant effect on retained earnings. The coefficient was -0.2002 with a p-value of 0.3963, implying that dividend payout ratio does not have a significant impact on retained earnings among the sampled firms.

5.2 Conclusion

This study assessed the effect of selected growth indicators on retained earnings of quoted food and beverage firms in Nigeria over a sixteen-year period (2009–2024). The growth indicators examined were firm size, turnover, and dividend payout ratio. Using secondary data from five purposively selected firms, the analysis provided insights into how these variables influence the firms' ability to retain earnings for reinvestment.

The findings reveal that turnover significantly influences retained earnings, highlighting the importance of revenue generation in sustaining internal financing for future growth. While firm size showed a positive relationship with retained earnings, its effect was not statistically significant, suggesting that other factors may mediate the impact of firm scale on earnings retention. The dividend payout ratio was found not to have a significant impact, indicating that dividend distribution policies may not necessarily constrain the firms' capacity to retain earnings.

Hence, the study underscores the relevance of growth-oriented strategies, especially in enhancing performance, for improving retained earnings and financial sustainability in the food and beverage sector. It also suggests that management decisions regarding dividends are shaped by multiple considerations beyond just earnings retention goals.

This research contributes to a deeper understanding of the internal financing dynamics within Nigerian manufacturing firms and provides useful insights for policymakers and corporate managers aiming to strengthen financial resilience through effective earnings retention strategies.

5.3 Recommendations

Based on the specific findings of this study, the following recommendations are made:

i. Firms should focus on expanding their size by strategically investing in productive assets. Such investments will not only enhance operational productivity but also increase the capacity to retain earnings for future growth and reinvestment.
ii. Managers in the Nigerian food and beverage manufacturing industry should actively pursue strategies to increase turnover. Given its positive and significant impact on retained earnings, efforts such as improving product quality, moderating prices, enhancing marketing and sales promotion, and exploring new market opportunities are critical to boosting turnover.
iii. Firms should adopt appropriate and balanced dividend policies that carefully consider the trade-off between distributing dividends and retaining earnings to sustain growth.

5.4 Contribution to Knowledge

This study makes a significant contribution to the existing body of knowledge on corporate growth indicators and retained earnings. It enriches the literature by providing empirical evidence on how selected corporate growth indicators influence retained earnings, particularly within the Nigerian context. The key contributions of this study are as follows:

i. This study addresses a gap by focusing on firms operating within the Nigerian economic environment. While much of the existing research on corporate growth and retained earnings centers on developed economies, this work is among the few that domesticates the subject, providing valuable insights relevant to emerging markets like Nigeria.

ii. Unlike previous studies that often concentrate on a single corporate growth indicator, this research simultaneously examines multiple growth variables and their collective impact on retained earnings.
iii. The study enhances methodological rigor by employing all three variants of panel data regression techniques, alongside several preliminary diagnostic tests. This multifaceted approach strengthens the robustness and reliability of the findings.

5.5 Suggestions for Further Study

Recognizing that this study, like any research, is not exhaustive, the following areas are recommended for further investigation:

i. The effect of corporate growth indicators on the retained earnings behavior of agro-allied firms in Nigeria.
ii. Examination of the degree and direction of causality between corporate growth indicators and corporate governance practices in selected Nigerian firms.
iii. Comparative studies involving countries other than Nigeria to explore the generalizability of findings across different economic environments.
iv. Application of alternative methodologies and analytical techniques to deepen understanding and validate results.

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