Effect of Firms' Growth Indices on Account Receivable of Food and Beverage Manufacturing Firms in Nigeria

Nwankwo, Geraldine Chinyere [1]; Prof. Oliver Inyiama Ikechukwu [2]; Iroegbu Ferdinand N., PhD [3]

[1, 2 & 3] *Department of Accountancy,*

Faculty of Management Science,

Enugu State University of Science and Technology (ESUT), Enugu, Nigeria.

[1] *Cynthianwankwo604@gmail.com, 08137256699*

[2] *inyiamaik@yahoo.com, 08035507599*

[3] *Iroegbuferdinand2@gmail.com, 08033702215*

Abstract

Research Purpose: Understanding how firms' growth indices affect accounts receivable is crucial for effective financial management in Nigeria's food and beverage sector. This study evaluates the impact of sales growth, productivity growth, asset growth, and profit growth on accounts receivable.

Methodology: A sample of seven firms, selected from the twenty-two listed on the Nigeria Exchange Group (NGX), was analysed using secondary data from 2012 to 2022. The study utilised Panel Least Square Regression and Durbin Watson Statistics to test hypotheses and check for autocorrelation.

Findings: Sales growth negatively and non-significantly affects accounts receivable (coefficient: -0.000300, p-value: 0.9926). Asset growth positively and non-significantly affects accounts receivable (coefficient: 0.005507, p-value: 0.5655).

Conclusion: The study concludes that sales and asset growth do not significantly impact accounts receivable, highlighting the need for better receivables management to boost sales growth.

Recommendations: Firm managers should improve accounts receivable management to enhance sales growth, which can subsequently increase profitability.

Key words: *Firms' growth indices, Account receivable, Sales growth, Asset growth, Profit growth.*

1.0 Introduction

Firms experience growth when its size increases, which is typically, gauged in terms of sales, employment, profits, or value added. Growth of a company can be organic or

acquired, and it may involve duplication or diversification into new markets (such as globalization). For various stakeholders, including owners who desire returns on their investments or society when new employment are produced, a company's expansion is an important topic.

Gupta, et al. (2013) opined that comprehending a firm's growth depends on how the firm is defined, how much it has grown, what it offers the market, what assets it controls, and its legal structure. Fernando (2022) posits that growth firm in finance is a business with a history of abnormally quick growth when compared to its sector's rivals. Even though this phrase is frequently, used in financial media, pundits frequently have different definitions of what it means. Uddenberg and Shim (2015) opines that businesses develop when they are able to grasp what their customers want and can meet those demands.

Nevertheless, empirical research has not consistently addressed the impact of asset expansion on business credit policy.. The first index focuses on factors that are favorable for starting new businesses, while the latter focuses on factors that are favorable for firm expansion.

Although there are many definitions of a growth firm, most investors would concur that they are businesses that have expanded at a rate much faster than the industry average in one or key underlying metrics When a company is said to be "expanding," financial measures like revenues, assets, or market share are typically brought up. Yet, the non-financial measures mentioned include the size of its active user base or the effectiveness of its production processes. Growth companies are often active in emerging markets with few, if any, dominating competitors. Companies can sometimes acquire rapid increases to their market share in certain situations, such as when Internet businesses were first establishing themselves in the 1990s, either because of superior product. Every economy in the world, including Nigeria, depends on the food and beverage sector. The value and significance of the actions and contributions made by the participants in this sector to the Nigerian economy have increased recently. The World Trade Organization as having the largest food market in Africa ranks Nigeria that has significant investment in the domestic industry and a high level of imports. Sales growth and assets growth are the independent variables of this study, while account receivable is the dependent variable.

2.0 Review of Related Literature

2.1 Conceptual Review

2.1.1 Firm Growth Indicators

Growth Indicators: Simply means the practice through which a country's true national income and per capita income rise over time. The two indicators of growth of an organization are: Expansion- when it leads to more employees and turnover which is a good indicator of growth. Profit – if an organization earns profit on a regular basis, it indicates growth.

A company's growth depends on factors such as size, expansion, and market offerings. Understanding growth transactions and patterns is crucial for understanding business success. Most scholars believe that businesses must begin, expand, deal with challenges, mature, and cease operations. Researchers generally hold two schools of thought: one holds that the enterprise's growth path is linear and predictable, while the other holds that it is more opportunistic or unpredictable (Gupta, et al. 2013).

2.1.2 Sales Growth

Sales growth is a measure of the change in revenue over a fixed period. Comparing revenue between two fiscal periods demonstrates the rate of growth – positive or negative, of a business. One of the most potent indicators in any firm is sales growth; it has a direct correlation to revenue, profitability, and is a key indicator of the strength of a sales staff. If a company's heartbeat is its revenues, its sales growth is its heart rate monitor, showing whether revenue targets achieved

Douglas, et al (2005) asserted that a high growth rate shows that businesses are performing well and that many studies frequently utilize sales growth as the measure of firm growth. Many studies calculate the growth rate by subtracting current year sales from prior year sales and dividing the result by prior year sales, which referred to as sales growth. Because it is simple to compute, sales growth has been the subject of many researches.

$$Sales\ Growth = \frac{CurrentYearsales - PriorYearsales}{PriorYearcostofsales} * 100$$

2.1.3 Asset Growth

Asset growth computed as a percentage change in assets over a specific period; the calculation is on a TTM basis. Asset divided into three categories: current, non-current, and intangible Non-current assets, such as buildings, plants, machinery, furnishings, and fittings, among others used for operational needs rather than for resale.

Maggina and Tsakianganos (2012), assert that a company's assets are its financial resources that anticipated helping the business's operations in the future. Additionally, the researchers contend that some assets, such as cash and accounts receivable, are financial in nature while others, including as inventories, land, buildings, and equipment,

are non-financial, tangible assets. Other non-physical assets include copyrights, goodwill, patents, and trademarks. Asset growth is determined as follows:

Assets Growth = $\frac{\text{current tear Assets – Prior year Assets}}{\text{Prior year Assets}} * 100$

2.1.4 Account Receivable

Sales made on credit, from which the business has not yet received the cash revenues, referred to as accounts receivable, Located in the balance sheet's "current assets" section. Trade credit is crucial to a company's success because it attracts prospective customers and protects its sales from undermined by competitors. Selling on credit becomes inevitable as long as there is business competition As a source of financing that is listed under current liabilities on the balance sheet, account payable indicates an investment in account receivables for the seller and a source of financing for the buyer, respectively (Pedro & Martinez, 2010). According to Gill (2011), achieving the ideal balance between cash flow management businesses is the primary goal of accounts receivables. Kungu, et al. (2014) Trade credit, defined as a firm giving its customers credit for its goods or services when the firm does not receive payment in cash.

2.2 Theoretical Framework

2.2.1 Growth of the Fitter Theory: Growth of the fitter theory was propounded by Alchian (1950). According to this theory, fitness is depicted by the firm profit, and the profitable firms grow and survive in the market while the other firms exit due to poor performance.

The literature has focused a great deal of attention on firm development and profitability, and that the Fitter hypotheses grow. According to this theory, firm profit serves as a proxy for firm health, and profitable firms expand and thrive in the market while underperforming firms fail and leave. (Kouser et al, 2012). Theoretical research by Alchian (1950) asserted that stronger businesses expand and endure, while weaker ones lose market share and perish, because of the natural selection process. Therefore, it is feasible to predict that profitable firms will grow if the profit rate reflects the degree of fitness (Jang and Park, 2011).

2.2.2 Agency Theory

The Agency Theory was propounded by Jensen and Mecking (1976).

It states that a company's ownership (principal) and management (agent) are separated, leading to an agency conflict. The principal demands agents to improve financial performance, while the agent prioritizes his interests. The principal recruits an

independent commissioner to monitor the agent's performance; ensuring agents follow the principal's wishes, maximizing profits through sales growth.

Profitability shows a satisfactory degree of market demand while also limiting the risk associated with acquiring and depending on outside sources of financing. Profit, through research and development, it can take advantage of technological chances to expand, resulting in innovations in both products and processes. Empirically, the organization is very concerned about both firm development and profitability, but there is still no clear correlation between the two. Many researchers find evidence that profitability has a positive effect on firm growth (Jang and Park, Kouser et al., 2012, find that profitability is negatively affected by growth.

2.2.3 Financing Constraint Growth theory

The theoretical thinking and debate on the finance – growth nexus can be traced back to the work of Bagehot during 1870s. Firm credit policies cover firm finances and how firms establish their credit requirements to guarantee the liquidity and profitability of the firms. As a result, the financial constraint theory serves as the foundation of this research.

Jun and Bach (2022) examined the cognitive financial constraints and firm growth. This research contrasts the cognitive financial limitations faced by entrepreneurs from the financial supply restrictions faced by small business development. They suggested those small enterprises' financial market failures, drawing on the research on cognitive styles and institutional theory. By examining a large data set of more than 200,000 small enterprises in Vietnam, we can demonstrate how both cognitive and financial supply restrictions limit company development. The cognitive financial restrictions emanating from the demand side of company financing require additional focus in light of this noticeably negative effect.

2.3 Empirical Review

2.3.1 Sales Growth and Account Receivable

Increased accounts receivable, from both new and existing clients, as well as by giving greater credit to entice new business, are frequently correlated with growth in sales. A business may experience short-term liquidity issues if a bigger portion of its sales are accounts receivable made on credit. A situation like this could occur if a business is cash-strapped because of lagging cash sales during the course of the business cycle.

Becker et al (2010) examined the impact of firm size on profitability in the US manufacturing industry, analyzing data from 1987 to 2002. Results showed a negative and statistically significant relationship between total assets, sales, workforce, and profitability using simple regression. Within 109 SIC four-digit manufacturing industries, 47 of the

industries, indicated that profitability rises at a decreasing rate and finally drops, while 52 of the industries, showed that there is no correlation between profitability and scale of the 109 industries. As businesses become larger in up to 11 industries, profitability keeps rising. The relationship between size and profitability is therefore sector-specific. However, it showed that profitability for businesses of a particular size defined in terms of total assets and revenues are adversely associated with the number of employees, independent of the shape of the size profitability function. The findings are perplexing in light of previous research claiming that common stock returns are inversely connected with size whether a company's market value or previous research asserting that size is a proxy for risk determines size. The results may be interpreted in light of these studies to indicate that large firms generate excess returns, small firms do not cover their capital costs, or that accounting returns simply exhibit different firm-size-related behavior from market returns.

In order to investigate the effects of efficient credit sales management on the profitability and liquidity of the Nigerian food and beverage sectors from 2007 to 2011, Ifurueze (2013) chose primary focus of the study, which was the interaction between each of the individual factors affecting the credit sales, profitability, liquidity, and activity level of the companies under investigation, including the credit sales percentage, gross profit margin, return on capital employed, debtors collection period, debtors turnover, acid test ratio, and return on current assets. Additionally, factors related to credit policy, such as credit standards, credit terms, and collection policy and processes, looked at. Data gathered from the year-specific businesses' annual reports and accounts. Statistics supplied to the pertinent data. The assumptions were tested using analysis of variance (ANOVA). The research shows that productivity is at a desirable level when credit sales properly managed. The study's result showed that a firm's liquidity is at a desirable level when its debtor's turnover is favorable.

Yadanfur and Ahman (2014) looked at Swedish data to determine how the availability of credit affects SMEs' ability to expand their sales. Data collected from the company for the years 2009 through 2012 were used to conduct the study, which included a sample of 13,548 Swedish SMEs from four distinct economic sectors. The three-stage least squares (3SLS) method used to analyze a cross-sectional plane of data. The study provides empirical evidence that trade credit in the form of receivables effects sales growth significantly and favorably, demonstrating that SMEs investing in more receivables are more likely to experience growth. Additionally, lagged sales growth, firm size, and firm age, all positively connected with growth, whereas firm age adversely correlated. The finding has the implication that managers can increase firm development by effectively

managing the supply of credit to their clients, particularly those with limited liquidity, and thereby boosting sales growth.

2.3.2 Assets Growth and Account Receivable

Accounts receivable management often aims to boost liquidity and short-term solvency as well as inventory reduction, sales, and profitability. Depending on the nature of the industry, these and other factors have varying effects on the quantity of accounts receivable.

Sellers and Veronica (2016) examined the impact of company size on the economic performance of variances in Italy. Secondary data from 1995 – 2012 gathered for the research from a sample of 723 Italian wineries (limited companies and cooperatives). A non-parametric method used to estimate efficiency as a performance indicator, along with various conventional profitability and productivity measures. The impact of company size on these performance indicators examined using a number of parametric and non-parametric tests, including ANOVA, Ordinary Least Square, and Kristal Wallis (KW) test. The findings indicate that the size of wineries in Italy affects their economic success favorably. . To ensure the competitiveness of their vineyards, it was advised, that managers understand the value of keeping a close eye on their own performance.

Nwachukwu and Nwoha (2022) studied liquid assets and operational performance of industrial and consumer goods sectors in Nigeria. Turnover (TNV) is the operational performance variable under study, while Inventory (INV) and Cash Bank Balances (CBB) represent the liquid assets variables under study. The annual reports of the companies undergoing evaluation served as a source of secondary data from 2011 to 2020. With the aid of Random Effect Pearson correlation technique, five hypotheses were estimated. The study's conclusions indicate that: Inventory (INV) has a moderately to weakly positive association with Turnover (TNV) in Nigeria's industrial goods sectors and a positive and significant link with TNV in the consumer goods sector. Similarly, there is a weak positive correlation between Cash Bank Balances (CBB) and the turnover of the consumer products industry. This suggests that a company lacking sufficient liquid assets would inevitably experience a setback (i.e., find it challenging to fulfill short-term obligations). Based on the study's findings, the researcher draws the conclusion that, in the industrial goods sector, well-managed inventories will improve operational performance, whereas, in the consumer goods sector, inventory alone among the explanatory variables can accurately predict operational performance. The study's findings empirically demonstrate that the higher a company's liquid assets, the higher its turnover in Nigeria's industrial and consumer goods sectors. Therefore, the researcher advises management to focus more on these assets in order to maintain adequate performance in the sectors.

Okwo, et al. (2012) evaluated the effects of fixed asset expenditure on the profitability of the Nigerian brewery industry from 1995 to 2009. From among the Brewery companies listed on the Nigeria Exchange Group during the time, a sample of four (4) companies chosen. Based on the availability of data for the sample time, the four companies that make up the sample were those that listed on the Nigerian Exchange Group. Nigeria Breweries Plc, Guinness Nigeria Plc, International Breweries Plc, and Champion Breweries Plc were the companies that made up the collection. From the sampled companies' yearly reports and accounts, cross-sectional data were gathered. Utilizing the simple regression, outcome of the hypothesis test indicated that the amount of fixed asset expenditure has little to no bearing on the reported profit level of breweries in Nigeria.

Osigbemhe et al (2022) ascertained the effect of compensation policy on corporate performance of consumer goods firms in Nigeria. The specific goals are as follows: to determine the impact of pension contributions on profit for the year of consumer goods firms in Nigeria; to investigate the effect of salaries and wages on profit; and to determine the impact of gratuities and long service awards on profit for the year of consumer goods firms in Nigeria. The study used secondary sources of data; pertinent information was gathered from the yearly financial reports of the three Nigerian consumer goods companies that were chosen. The researchers also consulted journals, textbooks, and the internet. An ex post facto research design was used in the study. The causal relationship between the variables was determined using ordinary least square regression techniques. Following data analysis, the following conclusions were made: Wages and Salaries have a favorable and considerable impact on Nigerian consumer goods companies' annual profit. The profit of Nigerian consumer goods companies is positively and significantly impacted by pension contributions each year. Gratuity and Long Service Award have a favorable but insignificant impact on Nigerian consumer goods companies' annual profit. Ultimately, the researcher suggested that since equity-based pay is increasingly widely employed in businesses to ensure peak performance, every organization should implement it as a mandatory policy.

Ugwu and Eze (2019) evaluated how Nigerian business profitability affected the firm growth indexes. The study, which spanned the sixteen-year period from 2001 to 2016, used ex-post facto research technique. The annual reports and financial statements of a few brewing companies listed on the Nigeria Exchange Group were used to obtain secondary data. The technique of multiple linear regressions used to evaluate the data. The results demonstrate that total assets, market value, and firm size all significantly affect firm performance in Nigeria. The study makes the following recommendations: Firms should make an effort to maintain greater assets to raise their performance; they should also carry out necessary market capitalization to increase firm market value, which would

then result in a higher performance rating. To maintain the performance of businesses in Nigeria, companies should collaborate on luring larger share sizes.

2.4 Gap in Empirical Literature

It was obvious that twelve (12), or empirical investigations, assessed were carried out in Nigeria; Okwo, et al (2012) opined the impact of investment in fixed assets on profitability in breweries, using secondary data from 1995-2009. Okpe and Duru (2015) invested on the effect of receivable management on the profitability of building materials/chemical and paint manufacturing firms in Nigeria using secondary data from 2000 to 2011. Duru and Ubesie (2016) opined on the effect of the management of accounts receivable ratio in the profitability of industrial domestic products manufacturing firms using five quoted firms in Nigeria utilizing secondary data from 2000 to 2011. Nwachukwu and Nwoha (2022) evaluated liquid assets and operational performance of industrial and consumer goods sectors in Nigeria utilizing secondary data from 2011 to 2021. Again, there were only a few studies done in the food and beverage industries of the individual nations; this has led to more research gaps that needed to be filled. The present study considered to assess the effect of growth indicators on the accounts receivable of food and beverage firms in Nigeria from 2012 to 2022 in light of these research.

3.0 Methodology

3.1 Research Design

Ex-post facto research design was used in the study.

3.2 Area of Study

The study was conducted in Nigeria.

3.3 Sources of Data

The study's foundation was secondary data.

3.4 Population

The population included Twenty-two (22) food and beverage companies that were listed on the Nigeria Exchange Group (NGX).

3.5 Sample Size Determination

From the twenty-two (22) food and beverage companies registered on the Nigerian Exchange Group (NGX), seven (7) firms were chosen. Consistent earnings results from the study's 2012 to 2022 period were a key factor in choosing the seven companies. Out of the twenty-two firms that made up the study's population, fifteen did not consistently

post profits over the eleven years covered by the study; as a result, those firms were removed from the sample.

3.6 Model Specification

The following model was adopted based on the variables used in the study: $ACR=\beta_0 + \beta_1 (SAG) + \beta_3 (ASG) + \varepsilon$

Where: ACR = Account Receivable

SAG = Sales Growth

ASG = Assets Growth

β= Beta

ε= error term

3.7 Method of Data Analysis

The two study-developed hypotheses were put to the test using a panel least squares regression analysis. Using e-view 9.0 Statistical software, panel least square regression analysis was done. The goal is to determine how growth indicators affect the accounts receivable of food and beverage companies in Nigeria. The study's independent variables were the growth of sales, and assets, additionally, the presence of autocorrelation in the study's models was tested using the Durbin Watson Statistics (DW) test, and the Hausa man Redundant Test was utilized to assess the combined importance of the cross-section impact using sum of squares (F test) and the like hood function.

3.8. Decision rule:

The coefficient is significant if the p-value is equal to or less than 0.05, reject the null hypothesis if the t-statistics is greater than 2.0 and the p-value is less than 5% otherwise accept the alternate hypotheses.

4.0 Data Presentation and Analysis

4.2.1 Descriptive Statistics

The summary of the descriptive statistics of the variables are presented in table 4.2.1

	ACCOUNT RECEIVABLE	SALES GROWTH	ASSETS GROWTH
Mean	21826207	28634208	52674602
Median	16511648	10503665	14796751
Maximum	82237026	4.25E+08	1.38E+09

Minimum	1119395.	-20313135	-1.50E+08
Std. Dev.	19004873	61875354	1.67E+08
Skewness	1.435878	4.140214	6.691151
Kurtosis	4.695250	24.05482	53.02070
Jarque-Bera	35.67939	1642.252	8602.044
Probability	0.000000	0.000000	0.000000
Sum	1.68E+09	2.20E+09	4.06E+09
Sum Sq. Dev.	2.75E+16	2.91E+17	2.12E+18
Observations	77	77	77

Source: E views 9.0, Output 2023

The table abodes' descriptive statistics list of all of the observations' statistical properties. These include median and mean metrics of central tendency. The standard deviation used to denote series dispersion. Table 4.1.2 indicates that the mean of the variables are ₦21826207, ₦28634208,—₦48059656, with standard deviations of ₦19004873, ₦ 61875354, ₦2.34E+08, for account receivable, sales growth, and assets growth respectively. The table reveals that the Skewness values of the variables are above one. The Kurtosis coefficient values of all the variables are greater than one, which are significantly higher than the Kurtosis of a normal distribution.

4.3 TEST OF HYPOTHESES

The three null hypotheses formulated for the study were tested using panel least square analysis. The decision rules for the test of hypotheses were based on the significances of the t-statistics, which are represented by the p-values. The following steps were taken in arriving at a decision concerning each hypothesis:

1. Each hypotheses was restated in the null and alternative forms,
2. The decision criteria or criterion were stated,
3. The E-views results were presented in a tabular form,
4. The null hypothesis is rejected or accepted based on the decision of the criteria or criterion

TEST OF HYPOTHESIS ONE:

Restatement of Hypothesis:

H_{O1}, Sales growth does not significantly affect account receivable of food and beverage firms in Nigeria.

H_{al}, Sales growth significantly affect account receivable of food and beverage firms in Nigeria.

Decision rule: The coefficient is significant if the p-value is equal to or less than 0.05, reject the null hypothesis if the t-statistics is greater than 2.0 and the p-value is less than 5% otherwise accept the alternate hypothesis.

Table 4.3.1 Panel Regression Result (fixed effects model**)**

Dependent Variable: ACCOUNT_RECEIVABLE

Method: Panel Least Squares

Date: 06/01/23 Time: 08:11

Sample: 2012 2022

Periods included: 11

Cross-sections included: 7

Total panel (balanced) observations: 77

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	21834795	1683954.	12.96639	0.0000
SALES_GROWTH	-0.000300	0.031991	-0.009375	0.9926

Effects Specification

Cross-section fixed (dummy variables)			
Period fixed (dummy variables)			
R-squared	0.669567	Mean dependent var	21826207
Adjusted R-squared	0.574357	S.D. dependent var	19004873
S.E. of regression	12399028	Akaike info criterion	35.70540
Sum squared resid	9.07E+15	Schwarz criterion	36.25330
Log likelihood	-1356.658	Hannan-Quinn criter.	35.92456
F-statistic	7.032557	Durbin-Watson stat	0.977407
Prob(F-statistic)	0.000000		

Source: E views 9.0, Statistical Software Output 2023

The results in Table 4.3.1 shows that Sales growth has a negative and non-significant effect on account receivable of food and beverage firms in Nigeria. The table above shows that the Decision rules: reject the null hypothesis when the t-statistic (> 2.0) is -0.009375 below 2.0. Therefore, the alternate hypothesis is accepted. This is indicated by the coefficient of -0.000300, which is negative and non- significant at 0.05 level of significance (that is P – value 0.9926>0.05). Based on this, study strongly accepts the alternate hypothesis, which states that, Sales growth does not significantly affect receivable of food and beverage firms in Nigeria. The coefficient of determination (R^2) indicates 0.669567, which shows the explanatory power of the variable is high. This implies, that 66.96% of the variations in economic growth are being accounted for or explained by the variations in Sales growth within the period review, while the other variables not included in the model account for 33.04% of the variation in account receivable in Nigeria. The adjusted R – squared, R2 supports the claim of the R2 with

0.574357 indicating that 57.44% of the total variation in the dependent variable (account receivable) explained by independent variable (the regressors). The F-statistic is instrumental in verifying the overall significance of an estimated model recorded a coefficient of 7.032557 with a probability value of 0.000000, which is statistically significant. In other variable as specified in the model. In addition, the Durbin- Watson (DW) statistics recorded 0.977407 and this implies that there is autocorrelation since Durbin- Watson is not approximately equal to two. Therefore, the variables in the model are auto correlated.

Table 4.3.2 Redundant Tests

Redundant Fixed Effects Tests

Equation: Untitled

Test cross-section and period fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	12.890705	(6,59)	0.0000
Cross-section Chi-square	64.498691	6	0.0000
Period F	1.641918	(10,59)	0.1171
Period Chi-square	18.905366	10	0.0415
Cross-Section/Period F	5.693452	(16,59)	0.0000
Cross-Section/Period Chi-square	71.897405	16	0.0000

Source: E views 9.0, Statistical Software Output 2023

The Redundant Fixed Effects Tests consists of two tests ("cross section F" and cross section chi – square) that evaluate the joint significance of the cross – section effects using sum of square (F test) and the like hood function (chi–square). The corresponding restricted specification is one, which there are period effects only. The two statistic values

(12.890705 and 64.498691) and association P- value (0.0000 < 0.05) rejects the null hypothesis that the cross section effects are redundant.

TEST OF HYPOTHESIS TWO:

Restatement of Hypothesis:

H_{O2}, Assets growth does not significantly affect account receivable of food and beverage firms in Nigeria.

$H_{a2,}$ Assets growth significantly affect account receivable of food and beverage firms in Nigeria.

Decision rule: The coefficient is significant if the p-value is equal to or less than 0.05, reject the null hypothesis if the t-statistics is greater than 2.0 and the p-value is less than 5% otherwise accept the alternate hypothesis.

Table 4.3.3 Panel Regression Result (fixed effects model**)**

Dependent Variable: ACCOUNT_RECEIVABLE

Method: Panel Least Squares

Date: 06/05/23 Time: 21:05

Sample: 2012 2022

Periods included: 11

Cross-sections included: 7

Total panel (balanced) observations: 77

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	21536148	1495729.	14.39843	0.0000
Assets_Growth	0.005507	0.009528	0.577957	0.5655

Effects Specification

Cross-section fixed (dummy variables)

Period fixed (dummy variables)

R-squared	0.671427	Mean dependent var	21826207
Adjusted R-squared	0.576753	S.D. dependent var	1900487 3
S.E. of regression	12364086	Akaike info criterion	35.69975
Sum squared resid	9.02E+15	Schwarz criterion	36.24766
Log likelihood	-1356.441	Hannan-Quinn criter.	35.91891
F-statistic	7.092005	Durbin-Watson stat	0.959847
Prob(F-statistic)	0.000000		

Source: E views 9.0, Statistical Software Output 2023

The results in Table 4.3.3 shows that Assets growth has a positive and statistically non-significant effect on the account receivable of food and beverage firms in Nigeria. Decision rules: reject the null hypothesis when the t-statistic (> 2.0) is 0.009528below 2.0. Therefore, the alternate hypothesis is accepted. This is indicated by the coefficient of 0.005507, which is positive and non-significant at 0.05 level of significance (that is P – value 0.5655>0.05). Based on this, study strongly accepts the alternate hypothesis, which states that, Assets growth does not significantly affect receivable of food and beverage firms in Nigeria. The coefficient of determination (R^2) indicates 0.671427, which shows the explanatory power of the variable is high. This implies that 67.14% further justification, that this effect model has a ″good″predictor of account receivable of cost of sales growth is known and the variations in economic growth are being accounted by the variations in assets growth within the period review. While the other variables not included in the model account for 32.86% of the variation in account receivable in Nigeria.

The adjusted R – squared, R2 supports the claim of the R2 with 0.576753indicating that 57.68% of the total variation in the dependent variable (account receivable) explained by independent variable (the regressors). The F-statistic is instrumental in verifying the overall significance of an estimated model recorded a coefficient of 7.092005with a probability value of 0.000000, which is statistically significant. In other variable as specified in the model. In addition, the Durbin- Watson (DW) statistics recorded 0.959847and this implies that there is autocorrelation since Durbin- Watson is not approximately equal to two. Therefore, the variables in the model are auto correlated.

Table 4.3.4 Redundant Tests

Redundant Fixed Effects Tests

Equation: Untitled

Test cross-section and period fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	16.938680	(6,59)	0.0000
Cross-section Chi-square	77.121590	6	0.0000
Period F	1.743137	(10,59)	0.0922
Period Chi-square	19.931895	10	0.0299
Cross-Section/Period F	7.432207	(16,59)	0.0000
Cross-Section/Period Chi-square	84.990310	16	0.0000

Source: E views 9.0, Statistical Software Output 2023

The Redundant Fixed Effects Tests consists of two tests ("cross section F" and cross section chi – square) that evaluate the joint significance of the cross – section effects using sum of square (F test) and the like hood function (chi–square). The corresponding restricted specification is one, which there are period effects only. The two statistic values (16.938680 and 77.121590) and association P- value (0.0000 < 0.05) rejects the null hypothesis that the cross section effects are redundant.

4.4 Discussion of Findings:

The researcher based the discussion of findings using fixed effects model (FEM)

4.4.1 Sales growth and account receivable in Nigeria

Null hypothesis One: Sales growth was rejected when the t-statistic (> 2.0) is -0.009375 below 2.0. Therefore, the alternate hypothesis is accepted. This is indicated by the coefficient of -0.000300, which is negative and non- significant at 0.05 level of significance (that is P – value 0.9926>0.05). Based on this, study strongly accepts the alternate hypothesis, which states that, Sales growth does not significantly affect receivable of food and beverage firms in Nigeria. Suggesting that sales growth negatively affects account receivable of the firms. Based on this, it is not safe to say that sales growth of food and beverage firms in Nigeria negatively and non- significantly affect account receivable of the firms during the period covered by the study. This finding can be linked to the growth of the fitter theory developed by Kouser et al, 2012 in his theory of the fitter theorized that the Fitter hypothesis grow according to this theory, firm profit serves as a proxy for firm health, and profitable firms expand and thrive in the market while underperforming firms fail and leave. The result of the study is consistent with the studies of Becker, Kaen, Eteban and Bauman (2010) who confirmed a negative and statistically significant relationship between the total assets, total sales, number of employees of the firms and their profitability. However, this result is inconsistent with some previous studies reviewed as follows: Ifurueze (2013) discovered that when credit sales are effectively managed profitability is at a desirable level.

4.4.2 Assets growth and account receivable in Nigeria

Null hypothesis Two: Assets growth was rejected when the t-statistic (> 2.0) is 0.009528below 2.0. Therefore, the alternate hypothesis is accepted. This is indicated by the coefficient of 0.005507, which is positive and non-significant at 0.05 level of significance (that is P – value 0.5655>0.05). Based on this, study strongly accepts the alternate hypothesis, which states that, Assets growth does not significantly affect account receivable of food and beverage firms in Nigeria. This result is consistent with the findings of the following studies: Sellers and Veronica (2016) confirmed that size has a positive influence on the economic performance of wineries in Italy. The result is, however, inconsistent with the finding of the following studies Okwo, Ugwunta and Nweze (2012) who discovered that the level of investment in fixed assets does not strongly and significantly impact on the level of reported profit of breweries in Nigeria. Onuoha and Nwafili (2017) revealed that credit policy and liquidity management has significant negative relationship to return on Assets.

5.0 Summary of Findings, Conclusion and Recommendations

5.1 Summary of Findings

Based on the data analysis, findings and discussions that ensued, the findings of the study are summarized thus:

i. That sales growth of Food and beverage firms in Nigeria; negatively and non-significantly affect accounts receivable of the firms,

ii. That assets growth of Food and beverage firms in Nigeria; positively and non-significantly affect accounts receivable of the firms,

5.2 Conclusion

The study was embarked upon in order to evaluate the effect of firms' growth indices on account receivable of food and beverage manufacturing firms in Nigeria. Two growth variables were considered in the study and were used as the independent variables of the study. The variables are sales growth, and assets growth. Secondary data on these variables and account receivable were collected from the published annual reports of the seven Food and beverage firms selected from the listed twenty-two firms in Nigeria. The data collected were analyzed using panel regression analysis as the main tool of analysis.

Based on the results of regression analysis, the discussion that ensued and the summary of findings, the study concludes that the independent variables, namely, sales growth is negatively and statistically non-significant affect account receivables of Food and beverage, while assets growth is positively and non- significantly affect account receivables of Food and beverage firms in Nigeria.

5.3 Recommendations

Based on the findings, discussions and conclusion, we hereby recommend that:

i. Recognizing the statistically non-significant negative effect of sales growth on account receivable, Food and beverage firm Managers in Nigeria should improve on sales growth by granting more credit facilities to their customers. Increase in Food and beverage sales will also increase account receivable of the firms. This will also go a long way to increase the firms' profitability.

ii. Food and beverage firm Managers in Nigeria should also improve more on their firms' account receivable management by increasing the firms' assets growth. This is particularly increase in stock of raw materials, work in progresses and stock of finished goods.

References

Becker-Blease, J. R., Kaen, F. R., Etebari, A., & Bauman, H. (2010).Employees, firm size and profitability in U.S manufacturing industries. *Investment Management and Financial Innovations Journal*, *2* (7), 7-23, https://www.businessperspectives.org/images/pdf/applications/publishing/templates/article/assets/3235/imfi_en2010_Becker.pdf

Cooper, M. J., Gulen, H. M., & Schill, J. (2008).Asset growth and the cross section stock returns. *Journal of Finance forth coming*, 5 (2), 25-32. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=760967

Duru, A. N., Ekwe, M. C., & Okpe, I. I. (2014).Accounts receivable management and corporate performance of companies in the food and beverage industry: Evidence from Nigeria. *European Journal of Accounting Auditing and Finance Research*, *2* (10), 34-47, https://www.iajournals.org/articles/iajef_v3_i2_216_240.pdf

Duru, A. N. & Ubesie, M. C. (2016).Effect of management of receivable ratio on corporate profitability of industrial/ domestic: products in Nigeria *European Journal of Accounting Auditing and Finance Research*, 4 (9), 84 – 97, http://www.eajournals.org

Ezeanya, R. A., Inyiama, O. I., & Okwo, I. M. (2022).Employees' compensation packages and profitability of consumer goods firms in Nigeria, *Asian Journal of Economics, Business in Accounting, 23* (20), 151 – 162. https://doi.org/10.9734ajeba/2023/v23/201100

Fernando, W. (2022). Trade openness and growth: A Network based approach. *Journal of Applied Econometrics, 37* (6), 1182 – 1203. https://scholar.google.com/scholar?q=Fernando,+W.+(2022).+Trade+openness+and+growth:+A+Network+based+approach.+Journal+of&hl=en&as_sdt=0&as_vis=1&oi=scholar

Douglas, E. J. Fitzsimmons, J. R., & Steffens, P. (2005). Growth and profitability in small and medium sized from Australian: AGSE *Entrepreneurship Exchange, Melbourne, SSRN,* 1-20. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1263734

Gill, A., Beiger, N., & Mathur, N. (2010).Relationship between working capital management and profitability: Evidence from the United States. *Business and Economic Journal*, *10* (3), 101- 109. https://www.researchgate.net/publication/45433020_The_Relationship_Between_Workingcapital_Management_And_Profitability_Evidence_From_The_United_States

Guputa, P. D., Guha, S., & Krishna swami, S. S. (2013).Firm growth and its deteminants *Journal of .Innovation and Entrepreneurship* 2 (15), 9-15. https://innovation-entrepreneurship.springeropen.com/articles/10.1186/2192-5372-15

Ifurueze, M. S. K. (2013).Impact of effective management of credit sales on profitability and liquidity of food and beverage industry in Nigeria. *Global Journal of Management and Business Research, 13 (*2), 2249 - 4588.

Jahchan, P. (2017). Wind is productivity, and how do you measure it? https://www.weforum.org/agenda/ 2016/07/ what-is-productivity-and-how-do-you-measure-it

Jang, S., & Park, K. (2011).Inter-relationship between firm growth and profitability. *International Journal of Hospitality Management, 30* (1), 1027-1035. http://researchgate.net> 2571

Khan, R. A., & Ali, M. (2016). Impact of liquidity on profitability of commercial banks in Pakistan: An analysis on banking sector in Pakistan. *Global Journal of Management and Business Research: C. Finance*, 16 (1).

Kontus, E. (2013).Management of accounts receivable in a company economic thought and practice Parkas, 22 (1), 21-38. http://ideas.repec/org>avo> emend

Kouser, R., Bano, T., Azeem, M., & Hassan, M. (2012). Inter-relationship between profitability, growth and size: A case of non-financial companies from Pakistan. *Pakistan Journal of Commerce & Social Sciences,* 6 (2): 405-419. http://www.researchgate.net>.3300

Kungu, J. N., Wanjau, N. L., Waititu , A. .G., & Gekara, G. M. (2014).Effects of credit policy on profitability of manufacturing firms in Kenya. *IOSR Journal of Economics and Finance*, 2 (4), 1-7,http://www.researchgate.net>3347

Maggina, A., & Tsakianganos, A. (2012). Asset growth and firm performance evidence from Greece. *International Journal of Business and Finance Research 2* (6), 113-124. http://ssm.com/abstract =1949262

Nwachukwu, B. C., & Nwoha, C. (2022).Liquid assets and operational performance of industrial and consumer goods sectors in Nigeria. *Global Journal of Finance and Business Review*, 6 (2), 1 -15, https://doi.org/10.5281/zenodo.8072251

Okpe, I. I., & Duru, A. N. (2015). Impact of account receivable period on the profitability of building materials/chemical and paint manufacturing firms in Nigeria. *Journal of Research in Humanities and social Sciences, 3 (10), 1 -6,* https://www.researchgate.net> 3238

Okwo, I. M., Ugwunta, D. O., & Nweze, A.U. (2012).Investment in fixed assets and firm profitability: Evidence from the Nigeria brewery industry *European Journal of Business and Management, 4* (20), 25-32. *https://www.semanticscholar.org*

Onuh, O. P. (2018). Factors affecting firm success and growth in Nigeria manufacturing firms. *Journal of Finance and Economics, 5* (3), 33-41.

Onuoha, J. K., & Nwafili, I. S. (2017).Impact of credit management on profitability of manufacturing firm in Nigeria (A study of selected companies in Nigerian Exchange Group). *Research Journal of Finance and Accounting, 8* (10), 142-154. *https://core.ac.uk*

Onu, O. P. (2006). Factors affecting firm success and growth in Nigeria manufacturing firms . *Journal of Finance and Economics, 5*(3), 33-41.

Onyekwelu, U. L., Nwajei, N. B., Ugwu, K. O., & Okoh, J. (2017). Effect of firms' characteristics on financial performance of oil and gas companies in Nigeria. *Asia* Pacific Journal of Research in Business Management, *8* (3). 5-16, ISSN 2229 - 4204.

https://www.researchgate.net/publication/343577048_effect_of_firms'_characteristics_on_financial_performance_of_oil_and_gas_companies_in_nigeria#full-text

Osigbemhe, S. O., Nwoha, C. E., & Okwo, I. M. (2022).Effect of compensation policy on corporate of consumer goods firms in Nigeria. *Social Sciences and Humanities Business and Finance Science, Medicine and Technology Multidisciplinary International Institute of Advance Scholars Developments Publications, 7 (11).* *https://aspjournals.org*

Pedro, J., & Martinez, P. (2010).Determinants of trade credit: A comparative study of European SMEs. *International Small Business Journal,* 16 (1), 22-35. *https://jstor.org*

Sellers, R., & Veronica, A. (2016).Influence of size on winery performance: Evidence from Italy. Wine Economics and Policy 5 (2016), 33-41.

www.elsevier.com/locate/wep, *https://www.sciencedirect.com*

Singh, J. P., & Pandey, S. (2008). Impact of working capital management in the profitability of Hindalc industries limited. *Icfai University Journal of Financial Economics,* 6 (4), 62-7

Uddenberg, A. S., & Shim, W. M. (2015).Seeing the world through target- tinted glasses: Positive mood broadens perceptual tuning. Emotion, 15 (3), 319–328. *https://psycnet.apa.org*

Ugwu, R. & Eze, J. C. (2019).Effect of firms' growth indices on profitability of food & beverage firms in Nigeria. *Research Journal of Finance and Accounting, 9*(7),77 ISSN 2222-2847. *https://www.liste.org*

Umobog, A. A. (2015).Assessing the impact of liquidity and profitability ratios on growth of profits in pharmaceutical firms in Nigeria. *European Journal of Accounting, Auditing and Finance Research.* 3(10), 97-114, *https://eajournals.org*

Yadanfur, S. D., & Ahman, P. (2014).Investigated the impact of the credit supply on sales growth among small and medium sized enterprises (SMEs), Swedish evidence. *International Journal of Managerial Finance,* 11(3), 329-401. *https://ideas.repec.org*