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EFFECT OF CASH CONVERSION CYCLE ON TAX PLANNING IN LISTED INDUSTRIAL FIRMS IN NIGERIA

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Abstract: *This study examines the effect of cash conversion cycle on tax planning of listed industrial firms in Nigeria. Proxies to measure cash conversion cycle are account payable, account receivable and inventory turnover, while the tax planning is proxied by earnings before interest and taxes (EBIT). The study concentrated on the period from 2016 to 2023. Panel data was used to analyse the data sourced from the individual financial reports of the listed industrial firms. The sample adopted ten (10) listed industrial firms out of the thirteen (13) listed industrial firms in Nigeria due to unavailability of complete data. The study employed panel regression model to estimate the key relationship between cash conversion cycle and tax planning. The result shows that account payable had significant effect on tax planning of listed industrial firms in Nigeria. While, the result shows that account receivable and inventory turnover had no significant effect on tax planning of listed industrial firms in Nigeria. The study recommended that the industrial firms should maintain a balance between leveraging accounts payable for tax planning and maintaining good relationships with suppliers to avoid supply chain disruptions. Thus, a well-managed accounts payable policy can enhance a firm's ability to optimize both short-term liquidity and long-term tax savings. Managers of industrial firms should focus more on optimizing other aspects of their financial management for effective tax planning, rather than emphasizing accounts receivable. Industrial firms should maintain inventory levels that balance demand and supply to avoid overstocking or stockouts. Overstocking can increase holding costs, while stockouts can lead to lost sales.*

Keywords*: Cash Conversion Cycle, Account Payable, Account Receivable, Inventory Turnover, Tax Planning, Listed Industrial Firms.*

Introduction

Tax planning is a critical component of modern business strategy, enabling firms to optimize their financial performance by minimizing tax liabilities within the boundaries of legal frameworks. Effective tax planning enhances organizational profitability and shareholder value by conserving cash flows for reinvestment. Moreover, firms operating in tax-intensive environments, like Nigeria, must adopt strategic tax planning to navigate fluctuating tax regimes and mitigate compliance risks (Adeyemi & Adebayo, 2020).

The relationship between cash conversion cycle proxies and tax planning proxies is well-documented in prior research. For instance, higher accounts receivable levels may indicate lenient credit policies, potentially delaying tax payments due to deferred income recognition (Lazaridis & Tryfonidis, 2006). Similarly, efficient accounts payable management can reduce tax burdens by leveraging supplier credit terms to defer cash outflows (Sharma & Kumar, 2011). Inventory turnover influences earnings before profit and tax (EBIT) by impacting production efficiency and cost control (Gill *et al*., 2010). Together, these proxies interact to shape a firm's overall tax planning strategy, as evidenced by studies on emerging markets (Olowokere & Emmanuel, 2016).

The cash conversion cycle measures the time it takes to turn investments in inventory and receivables into cash inflows from sales is measured by the cash conversion cycle (CCC). Days sales outstanding (accounts receivable), days inventory outstanding (inventory turnover), and days payable outstanding (accounts payable) make up its three constituent parts. For industrial firms in Nigeria, where access to affordable capital is limited, managing cash conversion cycle components such as accounts receivable, accounts payable, and inventory turnover which ensures sustainable growth amidst economic uncertainty (Uremadu *et al*., 2018). Aktas et al. (2015) revealed that shorter cash conversion cycle enables firms to generate cash, which may lead to timely tax payment and investment in tax savings optimization thereby reducing tax liabilities. In contrast, longer cash conversion cycle may lead to cash flow challenges, which may not lead to timely tax planning.

The Nigerian Exchange Group in 2023 reported that most industrial companies, including Dangote Cement Plc and BUA Cement Plc, experienced remarkable revenue growth, with a 29.6% increase leading to a combined revenue of N1.17 trillion. However, this surge in revenue has been accompanied by a significant rise in tax obligations, escalating from N338.11 billion to N423.26 billion a 25.2% increase in the same period. This raises critical questions about the influence of cash conversion cycle on tax planning and it necessitates an investigation into whether effective cash conversion cycle strategies are a driving force behind these heightened tax liabilities.

Most studies focused on developed economies, with limited attention to tax planning in emerging markets like Nigeria, where industrial firms face unique challenges, including erratic fiscal policies and liquidity constraints (Adebayo et al. 2022). Second, theoretical gaps persist as existing frameworks often overlook how cash conversion cycle components interact with tax planning (Ali & Hameed, 2020). Third, methodological gaps exist, as prior studies predominantly rely on static panel models, failing to capture the dynamic interplay between cash conversion cycle and tax planning over time (Egbide et al., 2021).

These gaps highlighted the need to investigate the effect of cash conversion cycle and tax planning within the Nigerian context. Ramachandran and Janakiraman (2020) explored aspects of cash conversion cycle and tax planning, there may be a shortage of empirical research that uses data to quantify the relationship between these two aspects, especially across different industries or regions. Also, many of the existing research like Aljassasi and Matriano (2024); Panigrahi (2024); Wokeh and Nmehielle (2023); Mensah et al., (2021); Gimba et al. (2021); and Kabiru, Aliyu and Usman (2019) has primarily focused on financial performance rather than the direct impact of cash conversion cycle on tax planning. This study addresses this gap by specifically investigating how cash conversion cycle affects tax planning among listed industrial firms in Nigeria. In contrast to previous studies that often centered on financial performance metrics, this research will provide a focused analysis of how optimizing cash conversion cycle and tax planning in listed industrial firms in Nigeria from 2017-2023.

Literature Review

Concept of Cash Conversion Cycle

The cash conversion cycle (CCC) measures the time taken to convert investments in inventory and receivables into cash inflows through sales. It consists of three components: days sales outstanding (accounts receivable), days inventory outstanding (inventory turnover), and days payable outstanding

(accounts payable) (Deloof, 2003). Cash conversion cycle can also be defined as the period of time between the purchases of inventory for production, up to the time the goods are sold. It can also be defined as the management of assets and liabilities in a manner so as to continually have sufficient funds for other daily obligations (Gupta & Shruti, 2017). During this whole period there is a conversion of cash from inventory, to receivables, then to cash again. This cycle was formed by Sugathadasa (2018), to better monitor the inflow and outflow of cash and its corresponding effects on liquidity.

Chuke et al (2018) maintained that cash conversion cycle is inversely proportional to the organization's worth. Low cash conversion cycle shows that company is gathering receivable as rapidly as possible as well as postponing the payment of creditors as gradually as necessary which increases net present value (NPV) of cash flow and large company worth. Apparently, this study will adopt Besley and Brigham (2005) definition of cash conversion cycle which says, the length of time from the payment for the purchase of raw materials to manufacture a product until the collection of accounts receivable associated with the sale of the product.

Accounts Payable

In the work of Vincent (2014), account payables represent the average number of days it takes a company to pay its creditors/suppliers. Firms ordinarily prefer to delay payment for credit purchases while Supplies also play the game of inducing customers (debtors) to pay for credit purchases within the shortest period of time by offering cash discounts. Functionally, creditors payment period is represented by Average number of days' of accounts payable (accounts payable) divided by cost of goods sold multiplied by 365 days.

According to Chuke et al (2018), account payable reflects the average time it brings firms to pay their supplier. This was measured as account (payable/purchase). The larger the value the higher firms take to maintain their payment commitment to their supplier. Delaying payments to suppliers allows a firm to reach the quality of the products budget and can be cheaper and flexible sources of financing for the firms.

Based on this study, accounts payable refers to the short-term liabilities a firm owes to suppliers for goods or services received but not yet paid for.

Accounts Receivable

Gimba et al. (2021) opined that accounts receivables are aggregates of all the debts owed to a firm at a particular point in time. It represents the amount the firm expects to receive from its debtors in payment of goods and services delivered or rendered by the firm. Therefore, it is the responsibility of the financial manager to make decisions as regarding the policy that must be adopted in extending credit facilities to customers because of the problem of possible default. Chuke et al (2018) also stated that account receivable is measures as (account receivable/sales). This variable shows the average no of days that the firm takes to receive payment from its customer, the larger the value, the larger its investment in account receivable. Firms would, in general, rather sell for cash than on account, but competitive pressures force most companies to offer credit.

Based on this study, accounts receivable represents the credit extended to customers for goods or services delivered. It indicates the firm's capacity to generate revenue while offering flexible payment terms.

Inventory Turnover

Inventory turnover measures the efficiency with which a firm converts inventory into sales. High turnover rates indicate effective inventory management, reducing holding costs and freeing cash for other uses, such as tax planning (Lazaridis & Tryfonidis, 2006). Inventories are current assets that form a significant part of the assets of a firm which has a resale value that earn profit to the firm after cost expenses (Major et al., 2022)

According to Gimba et al. (2021), inventory can be defined as the list of stock, raw material, work in progress or finished good which is waiting to utilize in production or to be sold. The number of days' inventory is measured as (inventory/cost of goods sold) x 360. This variable reflects the average no of days of stock held by the companies. Longer storage times show a greater investment in inventory for an important level of operation. Large inventory and generous trade credit policy may lead to higher sales and greater inventory decrease the risk of stock out.

Tax Planning

Tax planning refers to the strategic arrangement of a firm's financial activities to minimize tax liabilities while complying with legal and regulatory frameworks. Conceptually, it involves managing taxable income, deductions, and credits to reduce the effective tax rate (Hanlon & Heitzman, 2010). Proxies for tax planning include Earnings Before Interest and Tax (EBIT), effective tax rate (ETR), book-tax differences (BTD), and tax savings strategies. Effective tax planning optimizes cash flow, enhances shareholder value, and supports sustainable business practices (Desai & Dharmapala, 2009).

Empirical Review

Panigrahi (2024) examined the effect of cash conversion cycle strategies on financial performance in Indian cement industry. The proxies are account receivables, inventory, accounts payables, cash holding. The methodology consist of sample of 31 Indian cement companies listed on the Bombay Stock Exchange and the data were analyzed for a period of 11-years (2010- 2020). The study utilised Pearson's correlation coefficient and random effect regression model analysis show that there exists a negative relationship between financial performance measured in terms of return on assets (ROA) and inventory turnover period (ITP) as well as accounts payable period (APP). While, a firm's performance is not significantly affected by the accounts receivable period (ARP) and cash conversion cycle (CCC). Moreover, the size of the firms and leverage are inversely related to ROA but the age of the firms is not significantly affecting their financial performances.

Agurto et al (2023) determined the relationship of cash on hand (COA) management on profitability in cement companies listed on the Lima Stock Exchange from 2017 to 2021. The A quantitative, longitudinal, basic, descriptive, and correlational methodology was used. Also, the financial positions of cement industry companies listed on the Lima Stock Exchange for the period 2017-2021 are examined. The findings revealed that accounts receivable turnover, inventory turnover and fixed asset turnover are related to ROA and ROE. However, the research design of the study was not stated and this makes the findings doubtful as the blueprint was not shown.

Muhammad and Jinjiri (2022) ascertained the effect of cash conversion cycle on consumer goods companies' firms in Nigeria. The study used the ex-post facto research design. The population for the study comprised quoted Consumer Goods Companies on the Nigerian Stock Exchange (NSE). The sample size of the study was ten quoted consumer goods companies purposively drawn from all the consumer good. The study focused on secondary data sources; obtained from annual financial reports and accounts. The data was analysed using correlation analysis and panel data regression. The results showed that inventory turnover period had a negative significant effect; secondly, average collection period had an insignificant negative effect. Therefore, it can be concluded that, there is a significant relationship between cash conversion cycle and firm's profitability in consumer goods Companies operating in Nigeria.

Gimba et al. (2021) studied the effect of cash conversion cycle on firm value of listed agricultural firms in Nigeria. Proxies such as payable payment period, receivable collection period and inventory turnover. While firm value has as proxy by Tobin's Q. The study concentrated on the period from 2010 to 2019. Secondary data was used in other to collect the secondary source of data from the individual financial reports of the listed agricultural sectors. The sample adopted four (4) listed agricultural firms out the five (5) in Nigeria due to the unavailability of data. The study employed regression model to estimate the relationship between

cash conversion cycle and firm value. The result showed that payable period has a significant effect on the firm value, while receivable and inventory period had no significant effect on the firm value.

Ramachandran and Janakiraman (2020) analyzed the relationship between cash conversion cycle efficiency and earnings before interest & taxes of the Paper Industry in India during 1997–1998 to 2015–20019. To measure the working capital management three index values viz., Performance Index, Utilization Index, and Efficiency Index are computed, and are associated with explanatory variables, viz., Cash Conversion Cycle, Accounts Payable Days, Accounts Receivables Days, Inventory Days. Further, Fixed Financial Assets Ratio, Financial Debt Ratio and Size (Natural log of Sales) are considered as control variables in the analysis, and are associated with the ebit. The study reveals that the Paper Industry has managed the working capital management satisfactorily. The Accounts Payable days has a significant (–)ve relationship with EBIT, which indicates that by deploying payment to suppliers they improve the EBIT. Thus, the paper was conducted in India and did not performs remarkably less period of 4 years.

Iqbal et al (2020) assessed the effect of cash conversion cycle on profitability of the firm. Three components are used to measure cash conversion cycle (CCC); average receivable period (ARP), average inventory period (AIP) and average payable period (APP). The dependent variable is profitability being measured by return on asset (ROA). The pooled data was collected from a sample of 10 firms of two manufacturing sectors of Oil & Gas and Engineering, listed on the Pakistan stock exchange for the period 2010-2018. Regression and correlation techniques were used for analysis and the study found that average receivable period and average inventory period have an adverse significant effect on profitability of the firm except average payable period. In the end, there exists a highly negative significant association among CCC and firm's profitability as ROA. The results showed that lesser the no. of days of CCC, the firm has greater profitability. This paper contributes to the literature, which shows the effect amongst CCC and ROA.

Omanga and Oluoch (2019) examined the effect of working capital management on tax efficiency of non-financial firms listed at NSE, Kenya from 2013-2018. The research reviewed the effect of variables including cash management, inventory management, accounts payables management, accounts receivable management and firm size on tax efficiency of non-financial firms listed at NSE, Kenya. To obtain the objectives of the study, a longitudinal research design was conducted on 42 non-financial firms listed at NSE from the period of 2013-2018. Data analysis was done using multiple regression model. The study found that there is a weak positive and significant effect of cash management, inventory management and firm size on tax efficiency of non-financial firms at NSE. The study also concluded that there is a negative but significant effect of accounts payable and accounts receivable management on tax efficiency of non-financial firms at NSE.

Theoretical Frameworks

Trade-Off Theory of Working Capital

This theory was propounded by Robichek and Myers (1966). The theory expresses that there is an ideal working capital that expands the estimation of a firm. It is of the view that the administration will set an objective influence proportion and afterward progressively move towards that. Davis and Cosenza (2014) opined that organizations select objective influence proportions dependent on a compromise between the advantages and expenses of expanded influence, he referenced duty, money related pain expenses and office costs as three factors that impact the decision of this objective influence proportion. The theory recommends that organizations focus on an ideal degree of liquidity to adjust the advantage and cost of holding money. The expense of holding money incorporates low pace of return of these advantages in light of liquidity premium and perhaps charge inconvenience. The advantages of holding money are in twofold: First, the organizations spare exchange expenses to raise reserves. Second, the firm can utilize fluid advantages to account for its exercises and speculation if different wellsprings of financing are not accessible or are amazingly costly.

The verifiable significance of the trade-off theory has often been questioned by Miller (1977) who believed that it has cheap deed – weight cost. For that reason, he recommended that if trade-off theory were correct, firm ought to have much higher debt level than we observe in actuality. Meyer (1994) was a predominantly fierce opponent in his presidential address to the American Finance Association meeting in which he planned what he termed the pecking order theory. Fama and French (1992) criticized both the trade-off theory and the pecking order theory in various ways. Welch (2012) stated that companies do not undo the effect of the stock price as they showed under the basic trade-off.

In this study, trade-off theory of working capital was adopted in order to help in elaborating the cash conversion cycle and tax effectiveness. This theory notes that firms can increase their value by minimizing costs associated with market imperfections such as taxes, bankruptcy costs, and agency costs, the practical implications of optimizing cash conversion cycle on tax planning have not been adequately explored.

Methodology

The research design for this study was expo-facto research design. Expo-facto design involves describing the relationship between the past factors on the present trend or occurrence. The population of the study covers thirteen (13) listed industrial firms in the Nigerian Exchange Limited as at December 2024 which are Austinlaz, Berger paints, Beta Glass, BUA Cement, CAP, Cutix, Dangote Cement, Greif Nigeria Plc, WAPCO, Meyer, Notore Plc, Portpaint, paints, Prem Paints. With filtering sampling technique, ten (10) industrial firms were used as sample for the study while Austinlaz Plc, BUA Cement, Notore Plc firms were excluded due to unavailability of data for the purpose of this study.

The panel data was extracted from the published annual reports of listed consumer firms in Nigeria, from 2016 - 2023. The research data related to account receivables, account payables and inventory turnover was used as proxies for cash conversion cycle of listed industrial firms in Nigeria, while EBIT was used as proxy for tax planning in this study. The panel data was analysed using E-views version 12. Descriptive statistics, correlation matrix, normality test and regression analysis were carried out and post estimation analysis such as Heteroskedasticity test, serial correlation and Hausman test was also carried out. The specific model given below for the Hausman test describes a convenient version for regression applications that involves testing whether certain transformations of the original regressors have zero coefficients. $H_n \equiv n\,(\theta_{1n} - \theta_{2n})\,S'\,[S\,V_n\,S]^{-}\,S'\,(\theta_{1n} - \theta_{2n})$.

The Model Specification:

The model adopted for this study is given as thus:

$EBIT_{it} = ao + \alpha_1 APR_{it} + \alpha_2 ARR_{it} + \alpha_3 ITR_{it} + e_{it}$……..(1)

Where;
$EBIT_{it}$ = Earnings before interest and tax (dependent variable)
APR_{it} = Account Payable Ratio
ARR_{it} = Account receivable Ratio
ITR_{it} = Inventory Turnover Ratio
a0 = Constant,
e_{it} = Error term

a1, a2, a3 = the slope or the coefficient of the independent variables.

Decision Rule
The decision rule to test the hypothesis of the study is as follows: If the p-value of the t-coefficient is less than 5% (0.05), the null hypothesis is rejected, otherwise accept.

Table 1: Variables Measurement

S/N	Variable	Nature	Measurement	Studies
1.	Tax planning	Dependent variable	Earnings before interest and tax (EBIT)	Sinha (2012), Gibson (2009).
2.	Account Receivable	Independent variable	Average sales per day is computed by dividing the total sales on No. of working days	Gimba, et al. (2021)
3	Account Payable	Independent variable	Average cost of goods sold per day is computed by dividing the cost of goods sold	Maness and Zietlow, (2005).
4.	Inventory turnover	Independent variable	Ratio of number of days the inventory is used divided by Cost of goods sold (365).	Gimba, et al. (2021).

Source: Authors Compilation (2024)

Results and Discussions

Tables 2: Descriptive Statistics

	EBIT	APR	ARR	ITR
Mean	9.668489	49.59514	14.67382	15.94411
Median	4.931400	43.17515	9.379450	12.97915
Maximum	51.02840	95.78250	58.54610	55.20830
Minimum	-40.34200	0.000000	0.460400	0.000000
Std. Dev.	15.00794	28.05869	12.86387	12.34398
Skewness	0.583697	0.062464	0.991371	1.370193
Kurtosis	4.606821	1.485189	3.432090	4.199645
Jarque-Bera	13.14895	7.700869	13.72657	29.82955
Probability	0.001396	0.021270	0.001045	0.000000
Sum	773.4791	3967.612	1173.906	1275.529
Sum Sq. Dev.	17793.81	62195.93	13072.84	12037.53
Observations	80	80	80	80

Source: E-Views 13, 2024

The descriptive statistics of the variables used in the study indicate that the mean values for EBIT, accounts payable, accounts receivable, and inventory turnover ratio are 9.67, 49.60, 14.67, and 15.94, respectively. The standard deviations, which measure the dispersion of the data from the mean, are 15.01 for EBIT, 28.06 for accounts payable, 12.86 for accounts receivable, and 12.34 for the inventory turnover ratio. The Jacque-Bera test results confirm the normality of the data distribution, indicating that the variables are suitable for further analysis and modeling in the study.

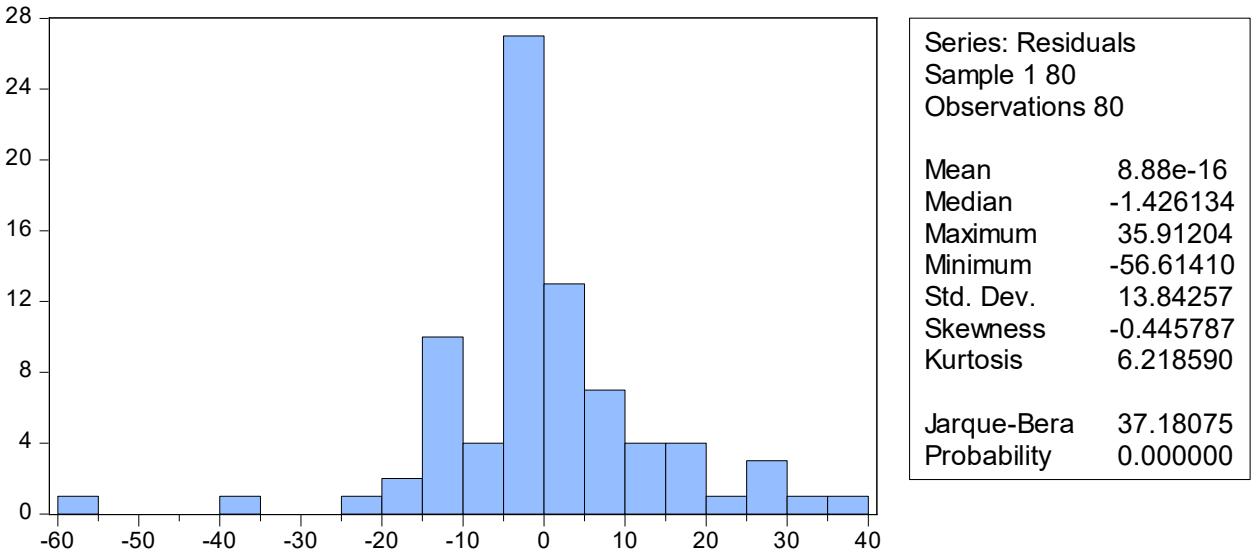
Table 3: Correlation Matrix

	EBIT	APR	ARR	ITR
EBIT	1	0.3790	-0.1846	-0.13959
APR	0.3790	1	-0.5802	-0.5045
ARR	-0.1846	-0.5802	1	0.2706
ITR	-0.1395	-0.5045	0.2706	1

Source: E-Views 13, 2024

Table 3 presents the correlation analysis between the cash conversion cycle and tax planning of listed industrial firms in Nigeria. The results show that EBIT is positively correlated with accounts payable ratio (APR) at a value of 0.3790, indicating a moderate positive relationship. Conversely, EBIT is negatively correlated with accounts receivable ratio (ARR) at a value of -0.18, signifying a weak negative relationship. Similarly, EBIT shows a weak negative correlation with inventory turnover ratio (ITR) at a value of -0.1395. These results highlight varying degrees and directions of association between EBIT and the selected components of the cash conversion cycle.

Table 4: Normality Test



Source: E-Views 13, 2024

The normality test in Table 4 reveals that the data is not normally distributed, as indicated by the Jarque-Bera statistic of 37.18075 and its corresponding p-value of 0.000. This result shows that the data is skewed, confirming a deviation from normality. However, since the series has fulfilled the pre-test requirements for using a panel data model, the study proceeds to generate the relevant regression models.

Table 4: Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	2.879734	3	0.4105

Source: E-Views 13, 2024

The results of the Hausman test presented in Table 4 indicate that the fixed effects regression model is the most appropriate for analyzing the study's data. With a p-value of 0.4105, the null hypothesis favouring the random effects model is rejected. Consequently, the fixed effects estimator was adopted for the regression analysis to ensure robust and reliable results.

Table 5: Panel Result

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-7.955877	6.584395	-1.208293	0.2317
APR	0.340625	0.084343	4.038572	0.0002
ARR	-0.065259	0.187489	-0.348069	0.7290
ITR	0.105908	0.197185	0.537100	0.5932

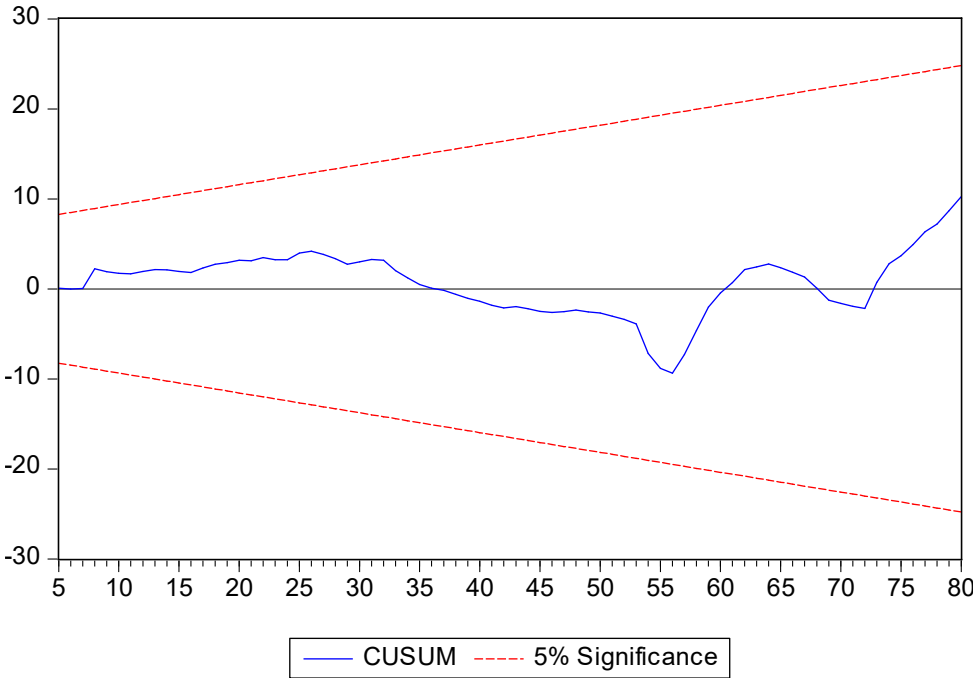
R-squared	0.776122	Mean dependent var	9.668489
Adjusted R-squared	0.705227	S.D. dependent var	15.00794
S.E. of regression	8.148253	Akaike info criterion	7.245802
Sum squared resid	3983.642	Schwarz criterion	7.841309
Log likelihood	-269.8321	Hannan-Quinn criter.	7.484558
F-statistic	10.94754	Durbin-Watson stat	1.463001
Prob(F-statistic)	0.000000		

Source: E-Views 13, 2024

The regression results indicate that accounts payable (APR) has a positive and significant effect on EBIT, as evidenced by a p-value of 0.0002, which is less than 0.05. This implies that for every 1% increase in accounts payable, EBIT increases by 0.340625. In contrast, accounts receivable (ARR), with a p-value of 0.729 (greater than 0.05), does not have a significant effect on EBIT. Similarly, inventory turnover ratio (ITR), with a p-value of 0.593 (greater than 0.05), does not significantly affect EBIT.

The coefficient of determination (R^2) value of 0.77 indicates that 77% of the variation in the dependent variable (EBIT) is explained by the independent variables included in the model. Furthermore, the probability value of the F-statistic (0.0000) confirms that the independent variables collectively have a significant impact on the dependent variable. Therefore, the model is deemed statistically fit and appropriate for analyzing the relationship.

Table 6: CUSUM Stability Test



The CUSUM stability test assesses whether the coefficients of the regression model remain stable over the period of analysis. The test involves plotting the cumulative sum of recursive residuals and comparing it against critical boundaries. If the CUSUM line stays within the critical bounds, it indicates that the model is stable and free from irregular variations or sudden shifts in the relationship between the variables. In this context, the CUSUM test confirms that the data do not exhibit any structural breaks or outliers that could compromise the reliability of the regression results. While the phrase 'data are normal' is used here, it more accurately suggests that the data behave predictably within the model's framework and do not deviate unexpectedly.

Discussion of Findings

Based on the findings of the research, the study is consistent with the research of Ramachandran and Janakiraman (2020), Omanga and Oluoch (2019) that the relationship between account payable and earnings before interest & taxes is significant, this implies that firms efficiently use this credit to finance operations or investments that contribute to higher earnings. It highlights the importance of managing supplier relationships and payment terms to sustain profitability. Also, the significant relationship suggests that firms may be using accounts payable to delay recognizing expenses or payments. By deferring payments to suppliers, firms may optimize their cash flows and align tax-deductible expenses to minimize taxable income in a given period.

The study is consistent with the research of Iqbal et al (2020), that the relationship between account receivables and earnings before interest & taxes is insignificant, this implies that since accounts receivable represents amounts owed by customers, its management may not directly affect the timing or amount of deductible expenses or taxable income. Firms might not rely heavily on changes in accounts receivable to optimize their tax position.

Finally, the study is consistent with the research of Muhammad and Jinjiri (2022), Panigrahi (2024) that the relationship between inventory turnover and earnings before interest & taxes is insignificant, this implies that since inventory turnover relates to how quickly inventory is sold or used, its management might not

directly influence tax planning decisions. Firms may not use inventory turnover as a tool to reduce taxable income or optimize deductions. The insignificance suggests that firms may prioritize other financial or operational strategies such as accounts payable management, depreciation, or capital expenditures over inventory turnover when making tax-related decisions.

Conclusion and Recommendations

The paper evaluates the effect of cash conversion cycle on tax planning of listed industrial firms in Nigeria. Thus, the study concluded that a significant relationship indicates that firms may rely on accounts payable as a short-term financing tool to manage liquidity without incurring immediate cash outflows. This reduces the financial strain on the company while maintaining operational efficiency.

Managing accounts receivable can influence cash flow, but its impact on tax planning might be minimal. Firms may prioritize managing liquidity and operational profitability over directly impacting their tax position through receivables. While inventory turnover impacts profitability, the relationship may not directly affect tax planning, as inventory-related expenses (like cost of goods sold) may already be optimized through standard accounting practices or tax rules. Changes in inventory turnover may not substantially affect the firm's taxable income.

Drawing from our research findings, the recommendations are proffered as follows:

i. Industrial firms should maintain a balance between leveraging accounts payable for tax planning and maintaining good relationships with suppliers to avoid supply chain disruptions. A well-managed accounts payable policy can enhance a firm's ability to optimize both short-term liquidity and long-term tax savings.
ii. Managers of industrial firms should focus more on optimizing other aspects of their financial management for effective tax planning, rather than emphasizing accounts receivable. Efficient management of accounts receivable remains important for liquidity and cash flow, but it may not provide direct tax planning.
iii. Industrial firms should maintain inventory levels that balance demand and supply to avoid overstocking or stockouts. Overstocking can increase holding costs, while stockouts can lead to lost sales.

Reference

Adebayo, F., Oluwaseun, A., & Olalekan, J. (2022). The role of cash flow management in financial sustainability of Nigerian firms. *International Journal of Finance and Economics, 17*(4), 281-295.

Adepoju, O., & Olagunju, S. (2020). Determinants of tax planning and its financial implications on firms. *Taxation and Policy Research, 14*(3), 45-60.

Adeyemi, A. A., & Adebayo, O. S. (2020). Tax planning strategies and financial performance of listed companies in Nigeria. *Journal of Accounting and Taxation, 12*(3), 79-87. https://doi.org/10.5897/JAT2020.0398

Agurto, Y. M. C., Rodriguez, V. H. P., Delgado, F. M. C., Cruz, L. del C. S. S., Ramírez, F. B., & Gavidia, M. J. F. (2023). Relationship of cash management to profitability of cement companies listed on the Lima Stock Exchange. *International Journal of Professional Business Review, 8*(4), 3-21.

Akinwale, M. B., & Olowookere, A. D. (2023). Tax strategy and corporate financial resilience in West Africa. *African Journal of Accounting, 12*(1), 52-66.

Akinwale, Y. O., & Obembe, D. O. (2023). Sustainable business practices in the Nigerian industrial sector: Implications for fiscal policy. *Business Horizons, 66(*3), 412-424. https://doi.org/10.1016/j.bushor.2022.12.004

Akinyomi, O. J. (2014). Effect of tax planning on firm value: Evidence from Nigerian manufacturing firms. *Research Journal of Finance and Accounting, 5*(12), 71-78.

Aktas, N., Croci, E., & Petmezas, D. (2015). Is working capital management value-enhancing? Evidence from firm performance. *Journal of Corporate Finance, 30*, 98-113. https://doi.org/10.1016/j.jcorpfin.2014.12.008

Ali, S., & Hameed, N. (2020). Theoretical advancements in cash conversion cycle management and tax planning: A systematic review. *Management Research Review, 43*(7), 825-841. https://doi.org/10.1108/MRR-12-2019-0532

Chen, S., Chen, X., Cheng, Q., & Shevlin, T. (2019). Are family firms more tax aggressive than non-family firms? *Journal of Financial Economics, 95*(1), 41-61. https://doi.org/10.1016/j.jfineco.2009.01.003

Chen, T., & Lin, B. (2019). Working capital and tax efficiency: Evidence from developing markets. *Asian Review of Accounting, 27*(4), 604-622. https://doi.org/10.1108/ARA-11-2018-0214

Deloof, M. (2003). Does working capital management affect profitability of Belgian firms? *Journal of Business Finance & Accounting, 30*(3-4), 573-588. https://doi.org/10.1111/1468-5957.00008

Desai, M. A., & Dharmapala, D. (2009). Corporate tax avoidance and firm value. *Review of Economics and Statistics*, 91(3), 537-546. https://doi.org/10.1162/rest.91.3.537

Egbide, B. C., Godfrey, O., & Oladele, R. (2021). Tax planning, corporate governance, and firm performance in Nigeria. *International Journal of Accounting Research, 45*(2), 123-137.

Egbide, O. A., & Olaleye, R. A. (2022). Firm-specific determinants of working capital and tax strategies. *Research Journal of Finance and Economics, 18*(3), 101-120.

Feng, Q., Firth, M., & Yu, Y. (2021). The impact of cash conversion cycle on firm performance during economic shocks. *Journal of Corporate Finance*, 71, 102089. https://doi.org/10.1016/j.jcorpfin.2021.102089

Gill, A., Biger, N., & Mathur, N. (2010). The relationship between working capital management and profitability: Evidence from the United States. Business and Economics Journal, 10(1), 1-9.

Gimba, J. T., Udenwa, T.A., & Nwala, N.N. (2021). Cash conversion cycle and value of listed agricultural firms in Nigeria. *International Journal of Innovative Research in Accounting and Sustainability. 6*(1), 5-18.

Hanlon, M., & Heitzman, S. (2010). A review of tax research. *Journal of Accounting and Economics*, 50(2-3), 127-178. https://doi.org/10.1016/j.jacceco.2010.09.002

Iatridis, G., & Lazaridis, Y. (2020). Corporate financial decisions and tax optimization in emerging markets. *Emerging Markets Review*, 45, 100712. https://doi.org/10.1016/j.ememar.2020.100712

Iqbal, J., Manzoor, A., Akhtar, Q. & Amin, S. (2020). Effect of cash conversion cycle on profitability of the firm: A study of oil & gas and engineering sector of Pakistan. *Journal of Accounting and Finance in Emerging Economies*, 6 (1), 263-272

Lazaridis, I., & Tryfonidis, D. (2006). Relationship between working capital management and profitability of listed companies in the Athens Stock Exchange. *Journal of Financial Management and Analysis, 19*(1), 26-35.

Mensah, S., Ofori, D., & Boakye, E. (2021). Exploring the dynamic relationship between tax planning and cash flow management in sub-Saharan Africa. *Journal of Development Finance, 15*(2), 203-219.

Muhammad D. A. & Jinjiri, K. (2022). Cash conversion cycle and profitability of listed consumer goods companies in Nigeria. *International Journal of Intellectual Discourse, 5*(1), 89–103.

Nwaobia, A. N., Ogundajo, G. O., & Ijeoma, N. B. (2019). Tax planning and firm value in the Nigerian listed firms. *Journal of Economics and Business, 7*(4), 35-47.

Olowokere, J. K., & Emmanuel, E. O. (2016). Effects of working capital management on profitability of listed firms in Nigeria. *Journal of Financial Studies, 6*(2), 82-97.

Oluwagbemiga, O. E. (2020). Inflation and its moderating effect on working capital management in Nigeria. *International Journal of Finance and Banking Research, 6*(2), 23-29.

Omanga, D.K. & Oluoch, O. (2019). Effect of working capital management on tax efficiency of nonfinancial listed firms at Nairobi securities exchange. *International Journal of Social Sciences and Information Technology*, 5(5), 336- 356.

Panigrahi, A. (2024). Working capital management strategies and financial performance: A cause-and-effect analysis. *Journal of Management Research and Analysis, 11*(1, 3–11.

Ramachandran, A. & Janakiraman, M. (2020). The relationship between working capital management efficiency and EBIT. *Managing Global Transitions*. 7(1), 61-74.

Sharma, A. K., & Kumar, S. (2011). Effect of working capital management on firm profitability: Empirical evidence from India. *Global Business Review, 12*(1), 159-173. https://doi.org/10.1177/097215091001200110

Uremadu, S. O., Egbide, B., & Enyi, P. (2018). Working capital management, firm liquidity, and profitability of Nigerian manufacturing firms. *Journal of Financial Economics, 23*(2), 122-134.