



AN ASSESSMENT OF THE NEXUS BETWEEN WORKING CAPITAL MANAGEMENT AND FINANCIAL PERFORMANCE: NIGERIAN EVIDENCE

UGBODUMA, Julius (MSc. Candidate)¹ & EBIAGHAN Orits Frank (PhD.)²

^{1&2} Department of Accounting, Delta State University Abraka, Nigeria

Volume No: 1	Issue No: 2	Page No: 174-187
Received: 29-09-23	Accepted: 10-11-23	Published: 26-11-23
Corresponding Author: EBIAGHAN Orits Frank (PhD.)		
Email: oritz001@yahoo.com		

Abstract

This study examined Working Capital Management and Financial Performance of Listed Firms in Nigeria using a sample of sixty-nine (69) quoted firms in Nigeria drawn out of the listed non-financial firms in Nigeria and sourced from the Nigerian Stock Exchange (NSE) factbook, and annual reports of the firms over a 10years period (2012-2021). Several independent variables were employed for the purpose of the investigation namely; cash conversion cycle, account receivable management, account payable management, current ratio and unpaid dividend with returns on assets as the dependent variable. The statistical methods employed in this study includes descriptive statistics, correlation analysis, granger causality test, pooled panel Ordinary Least Square test, the Hausman test and the Fixed effect model, all of which were conducted at a significance level of 5%. The findings showed that the main variables that affect returns on assets significantly of publicly listed companies during the observed study period are cash conversion cycle, account receivable management and account payable management. Although, current ratio and unpaid dividend showed no significant impact. The findings suggested therefore that some aspects of working capital management have a significant impact on financial performance, while others do not. Based on the findings the study recommended that firms operating in Nigeria need to focus on improving their cash conversion cycle and accounts receivable management in order to enhance their financial performance, also policies that create an enabling environment that can firms in Nigeria effectively manage their working capital should be at the forefront of policy formulation.

Keywords: Working Capital, Financial Performance, Firms, Nigeria.

INTRODUCTION

Working capital management (WCM) plays a critical role in corporate financial sustainability as it can directly affect firm liquidity, profitability and solvency (Nzete & Ebiaghan 2023). Mainly, working capital comprises of four components—cash, inventories, account receivables, and account payables. Cash management refers to a certain amount of cash to fulfill day to day business needs while keeping the cost of cash holdings to a minimum level. A large volume of

inventory is usually considered to be associated with higher sales volume and low transaction cost, thus stimulating profitability (Petersen & Rajan, 1997). Every organization is established to accomplish a certain goal. These aims, however, differ from one organization or firm to the next. The goals of service firms differ substantially from those of manufacturing and product distribution organizations. While services are frequently pre-paid or paid immediately following work completion, manufacture and distribution of goods may not be paid for immediately by customers, resulting in a debtor creditor relationship. The capacity of manufacturing and product distribution enterprises to efficiently handle credit in order to remain liquid so as to sustain their operations is critical to their existence (Onoyenure & Ebiaghan (2023); Orits-Ebigahan .& Ebiaghan,2023) The assessment of an adequate balance between the level of debt and credit is critical because it prevents enterprises from retaining excess idle cash balances or running out of cash necessary to carry out day-to-day operating activities (Obiekea & Ebiaghan, 2023)

This necessitates the implementation of specific systems to guarantee a balance between short-term assets and short-term obligations. In manufacturing and product distribution companies where vendors supply raw materials and other component parts and finished goods are typically supplied to customers on credit, the general and best practice is to develop strategies for paying suppliers for a longer period of time and collecting payments from customers in the shortest amount of time. Managers can therefore boost business profitability through enhancing working capital management. To summarize, high levels of current assets may have a detrimental impact on firm performance, whilst insufficient levels of current assets may result in reduced liquidity and stock outs due to difficulty in sustaining smooth operations and good financial management.

Statement of the problem

Despite the importance of working capital management, many appealing and viable investments with high rates of return have proven to be failures and have failed (Raheman, & Nasr, 2017). Many factories in Nigeria have closed due to poor working capital management. Katsina Steel Rolling Mill Co. Ltd, Niger Sugar Company Bacita, Golden Guinea Breweries Umuahia, and Aba Textile Mills Ltd Aba all went bankrupt, resulting in the premature and unexpected dismissal of numerous Nigerian workers and their placement on the labor market. Furthermore, the Ajakuta steel complex cut its work force from 5000 to 1000 in 2007 and a few businesses are unable to pay dividends to its equity investors and are still in shambles despite their incapacity to pay and are still mentioned on the floors of the Nigerian stock exchange market. Some firms have been bought by others due to their incapacity to stand alone. Savannah Sugar Company Limited, for example, was purchased by Dangote Industries Limited in 2002. Madugba, Ekwe and Kalu (2015) Mordi, & .Ebiaghan,(2022); Ebiaghan(2020) opined that firms in Nigeria continues to suffer from insufficient resources, which appear to be the result of bad management in the industry, such as low liquidity levels, enterprises operating without credit control departments, and rising insolvency. The capacity of financial administrators to properly monitor payables, assets, and receivables is critical to the performance of firms (Owolabi, Sunday & Chituru, 2012;. Ebiaghan & Jeroh. 2020, the following hypotheses were formulated:

H₀₁: Cash Conversion cycle has no significant effect on firm Financial Performance.

H₀₂: Account Receivable Management has no significant effect on firm Financial Performance.

H₀₃: Account Payable Management has no significant effect on firm Financial Performance.

H₀₃: Current Ratio has no significant effect on firm Financial Performance.

LITERATURE REVIEW

Conceptual Review

Working Capital Management

Working capital management is said to be efficient if an organization is able to finance daily operational expenses and meet other short-term obligations at lesser costs (Angahar and Alematu, 2014). Barine (2012) opines that effective management of both short-term payables and receivables combined with long term assets is required to meet daily business operational activities. Both short term receivables and payables are the main elements of working capital. Corporate performance depends largely on the effectiveness of strategies adopted in managing working capital in an organization because of its importance to the sustenance of its daily operations. The importance of working capital management to the realization of organizational objective is evident in literature. Efficient working capital management is crucial for consumer and industrial goods companies because most of their assets and liabilities are in the form of short term receivables and payables. Kargar and Bluementhal (1994), Ebiaghan. (2019) reveal that maintaining an optimal balance between profitability and liquidity should be accorded high priority in planning the working capital structure of firms so as to reduce the likelihood of bankruptcy and corporate failure. Abanum & Ebiaghan (2022) aver that firms are in business to make profit while ensuring that liquidity is at the optimum level. Maintenance of optimal balance between profitability and liquidity is therefore a crucial factor in determining working capital mix or structure for a firm. Since an optimal mix of working capital elements enhances firm performance, it follows therefore that effective working capital management ensures that shareholders get value for their investment.

Financial Performance

The financial performance of a firm or its profitability for the purpose of this study, is synonymous with return on assets, firm performance or financial performance. Dong and Su (2010) argue that financial performance is the main objective of a corporate organization. It is measured as returns generated on the capital invested in the business. In Hermanson & Edward's (2005), profitability is the firm's ability to generate income or not. According to Hifza Malik (2011), Ebiaghan, Jeroh & Ideh. (2021). Profitability is a crucial component of determining performance and it is one of the most important objectives of companies. As such, profitability is considered as an indicator of progress, improvement and a factor reflecting sustainability of the company in the near future.

Empirical Review

Yahaya & Onyabe, (2021) examined the effects of firm life cycle on financial performance of 91 listed firms in Nigeria over a ten-year period (2010-2019) using a correlational research design. Analysing using descriptive (mean, standard deviation, minimum mean and maximum mean) and inferential analytical techniques (Pearson Product Moment Correlation and Multiple Regression Analysis). They found maturity stage to have positive and significant effect on financial performance. However, they fail to find any significant effect at introductory stage, growth stage and shake-out stage. Akbar et al., (2020), examined the impact of working capital management (WCM) and working capital strategy (WCS) on firm's financial performance across different stages of the corporate life cycle (CLC). The empirical findings revealed that, overall, WCM is negatively associated with firm performance. However, this association is not static

across different stages of a firm's life cycle. Iqbal et al. (2014) used secondary data is used to analyse working capital on profitability taking working capital as independent variable and net operating profit as dependent variable. They found a significant negative relationship between net operating profitability and the average collection period, inventory turnover in days, average payment period and cash conversion cycle for a sample of Pakistani firms listed on Karachi stock exchange. Umenzekwe, Okoye and Aggreh (2021) examined the relationship between components of working capital and financial performance of selected Nigerian manufacturing firms. Six firms were chosen on purpose for the time period 2013-2020. Data was evaluated using a fixed and random effects panel data estimation technique. The results showed that the average payment duration had a strong positive association with return on investment, but the inventory turnover period had a substantial negative link with return on investment. Abbas Ibrahim and Isiaka (2021) examined the effect of working capital management on the financial performance of Non-financial companies quoted on the Nigerian Stock Exchange over the period 2014 - 2018 while using a panel research design. They found support for the theoretical stance that all components of working capital management have a major impact on financial success. Abubakar, Umaru & Olowe (2020) investigated the influence of working capital management on the financial performance of selected Nigerian listed enterprises The study's population comprises of ten (10) enterprises listed on the Nigerian stock exchange as of 31 December 2019, of which ten (10) firms were chosen as samples during a seven (11) year period from 2009 to 2019 using a deliberate selection approach. They found that Cash Conversion Cycle had a positive significant influence on the financial performance of chosen Nigerian quoted businesses, but Debt Equity Ratio and Inventory Conversion Period had no significant impact on the financial performance of selected Nigerian listed organizations. Working Capital Management was investigated by Godwin, Ailemen, Osabohien, Chisom, and Pascal (2018). Panel data from ten (10) Nigerian deposit money institutions were used, and the Panel fixed effect, Panel random effect, and Pooled OLS for the two models were used as proxies for bank profitability. They found that working capital management had a substantial impact on the profitability of the selected banks, and that return on assets was a more accurate indicator of bank profitability. Kiptoo (2017) assessed the influence of working capital management strategies on the financial performance of 54 Kenyan tea processing enterprises. The research employed a sample of forty-eight (48) tea processing enterprises, as well as primary (in the form of questionnaires) and secondary sources to collect data. Pearson ANOVA, correlation, and regression analysis were used. The study's findings suggested that working capital management techniques had a considerable impact on the financial performance of tea processing enterprises, with receivables and inventory management procedures having a negative and significant impact. Oseifuah (2018) investigated the Global Financial Crisis, working capital management, and non-financial business profitability. From 2003 to 2012, 75 non-financial enterprises listed on the JSE were sampled. Regression on panel data was employed. They found a substantial negative link between RCP and profitability only during the financial crisis. Second, during the crisis era, the connections between profitability and both the cash conversion cycle and the ICP, as well as profitability and PDP, are negative and positive, but they are inconsequential. Mabandla (2018) investigated the link between working capital management and the financial performance of South African listed food and beverage industries. Data from iress McGregor databases were

acquired from a sample of 12 food and beverage businesses listed on the JSE between 2007 and 2016. They discovered that implementing an aggressive working capital management approach contributes to the creation of shareholder value by improving the firm's financial performance. The firm's profitability increases as the cash conversion cycle shortens. Yusuf and Sani (2018) conducted research on the working capital management policy and financial performance of Nigerian food and beverage firms. The research was conducted using a descriptive research approach using secondary data. The research included ten food and beverage companies that are publicly traded on the Nigerian Stock Exchange. The data was analyzed using linear regression analysis. They found there is no substantial association between receivable collection period (RCP) policy and the profitability of Nigerian publicly traded food and beverage enterprises. The previous study concentrated on food and beverage businesses, but the present study focused on manufacturing enterprises listed on Kenya's NSE.

Conceptual Model

A conceptual model showing a directional relationship between working capital and firm's financial performance is presented in figure 2.1. Financial performance which is proxied by Return on assets (ROA) is shown to have a relationship with working capital which is sub categorized into Cash Conversion cycle (CCC), Account Receivable Management (ARM), Account Payable Management (APM) and Current Ratio (CR).

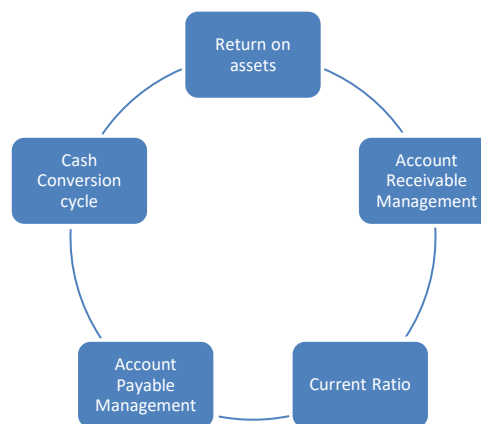


Figure 1: Schematic model

Source: Author's Schematic Model, 2023

METHODOLOGY

Research Design and Data Source

The study used an ex post facto research design. This study is focused on quantitative approach which includes data collection then application of different statistical tests and make conclusion on the basis of data analysis. This study will use data that are longitudinal in nature because it involves repeated observation of the same subjects or variables over a 10years period (2012-2021). The population under study relates to all companies in the consumer and industrial goods sector listed on the Nigerian Stock Exchange (NSE). The sample size consists of 69 companies selected from the population. Data was collected from the companies' financial annual reports and the Nigerian Stock Exchange (NSE) factbook of selected industrial and consumer goods firms.

Model Specification

The study adopts the model in Makori and Jagongo (2013) which was used to estimate the effect of working capital management on corporate profitability in Kenya and that of Okoye et al. (2020) in their study on working capital management and the performance of consumer and Industrial Goods Sectors in Nigeria, although, with some modification.

In the compact form the model is given;

$$FP_{it} = f(WCM_{it}) \quad (1)$$

The functional form of the above model is give as;

$$ROA = f(CCC, ARM, APM, CR, UD) \quad (2)$$

From the above functional form, the econometric model is specified thus:

$$ROA_{it} = \beta_0 + \beta_1 CCC_{it} + \beta_2 ARM_{it} + \beta_3 APM_{it} + \beta_4 CR_{it} + \beta_5 UD_{it} + \mu_{it} \quad (3)$$

Where;

The dependent variable is financial performance which is proxied by Return on assets (ROA). The independent variables are Cash Conversion cycle (CCC) (Days Inventory Outstanding + Days Sales Outstanding - Days Payables Outstanding), Account Receivable Management (ARM) (credit sales divided by the outstanding accounts on your balance sheet.), Account Payable Management (APM) (Accounts Payable Days x Value of Item Sale / 365), Current Ratio (CR) (measured by dividing current assets from current liabilities), the control variable is Unpaid Dividend (UD) (measured by multiply the number of shares held by the dividend per share declared every year), β_1 , β_2 , β_3 , β_4 and β_5 are the parameters to be estimated, t is the period of study, and i is the firms under study.

Analytical Procedures

The study will follow through with preliminary statistical test like the descriptive statistics and correlation analysis. This will followed by a pooled panel data regression analysis, and afterwards, the Hausman test will be used to determine if the fixed effect model (FEM) or random effect model (REM) is consistent for the study. According to Pandey (2005), the financial characteristics of firms from different sectors or industries vary, so the use of either a fixed-effects or random-effects model is justified.

RESULTS AND DISCUSSIONS

Data Analysis and Discussion of Results

Here, the results from the model estimation will be presented and discussed starting with the results of descriptive statistics below:

Table 1

Descriptive Statistics

	ROA	CCC	ARM	APM	CR	UD
Mean	1.816420	77095.70	77483.75	533.2065	1.501493	18.55861
Median	2.940000	13.65000	68.20500	150.9650	1.180000	13.72500
Maximum	176.2700	37117580	37117580	70080.58	36.41000	77.11000
Minimum	-179.9200	-70052.40	0.000000	0.000000	0.000000	0.000000
Std. Dev.	17.33847	1478272.	1478247.	3705.277	2.194598	16.44838
Skewness	-1.216595	23.31740	23.31779	15.27172	10.10394	1.141540
Kurtosis	43.05776	575.4823	575.4965	251.9174	134.2107	3.658496
Observations	690	690	690	690	690	690

Source: Author's computation (2023)

The summary statistics in Table 1 above helps in presenting us with the feature and characteristics of the variables under study. From the descriptive statistics, it can be seen that Return on assets (ROA) have a mean value of 1.816420, with minimum and maximum values observed as 176.2700 and -179.9200, respectively. Thus, it shows that the return on assets is quite stable for the quoted firms employed in the study. The mean Cash Conversion cycle (CCC) is 77095.70, it displayed a maximum and minimum value of 371175804 and -70052.40 respectively. The mean annual Account Receivable Management (ARM) is 77483.75, with a maximum value of 37117580 and a minimum value of 0.00000. Account Payable Management (APM) has a mean value of 533.2065 which implies that on average, all the firms listed have an aggregated positive account payable management. This is with range of values between a maximum of 70080.58 and a minimum of 0.00000. The mean value of Current Ratio (CR) and Unpaid Dividend (UD) is 1.501493 and 18.55861. The maximum values are 36.41000 and 77.11000 respectively with the minimum values given as 0.00000 and 0.00000 respectively. The results of the standard deviation indicated an insignificant dispersion of CR and UD from their respective mean values while the reverse is the case for ROA, CCC, ARM and APM. From the result of the skewness which measures the degree of asymmetry in the distribution of a variable, it can be observed that all the variables have positive skewness, suggesting that their distributions are right-skewed except ROA which exhibited a negative skewness. Based on the kurtosis result all the variables except UD are leptokurtic nature based on their values which are greater than 3. While a mesokurtic nature was displayed by unpaid dividend. Having examined the characteristics of the data, we proceed with another descriptive analysis that is the correlation matrix analysis which is presented below.

Table 2

Correlation Matrix Results

	ROA	CCC	ARM	APM	CR	UD
ROA	1.000000 -----					
CCC	0.217281*** [0.0000]	1.000000 -----				
ARM	0.217206*** [0.0000]	0.999997*** [0.0000]	1.000000 -----			
APM	-0.035635 [0.3500]	-0.004845 [0.8989]	-0.002360 [0.9507]	1.000000 -----		
CR	0.045510 [0.2325]	0.045582 [0.2318]	0.045402 [0.2336]	-0.066056 [0.0829]*	1.000000 -----	
UD	-0.022642 [0.5527]	0.012700 [0.7391]	0.012535 [0.7424]	-0.070504 [0.0642]*	0.034389 [0.3671]	1.000000 -----

Source: Author's computation (2023)

[] – p-values * - 10% significance ** - 5% significance *** - 1% significance

From the above correlation matrix presented in table 4.2 above, the only statistically significant relationships are the ones between returns of assets and cash conversion cycle, return on assets and account receivable management. Among the independent variables there also exist a statistically significant relationship between cash conversion cycle and account receivable

management, Account payable management and current ratio as well as unpaid dividend account payable management. On the aspect of correlation, there is a weak positive correlation between the dependent variables and cash conversion cycle, account receivable management and current ratio. There exist a weak negative correlation between the dependent variable and account payable management as well as unpaid dividend. Based on the observed correlation relationship, it is vital to note that correlation does not necessarily indicate impact or a causal relationship. Having seen associational relationship, next, we will take a look at the Pairwise Granger causality test.

Table 3
Pairwise Granger Causality Test

Null Hypothesis:	Obs	F-Statistic	Prob.
CCC does not Granger Cause ROA	621	7.33843	0.0069
ROA does not Granger Cause CCC		132.363	7.E-28
ARM does not Granger Cause ROA	621	7.34576	0.0069
ROA does not Granger Cause ARM		132.423	7.E-28
APM does not Granger Cause ROA	621	0.37183	0.5422
ROA does not Granger Cause APM		0.18494	0.6673
CR does not Granger Cause ROA	621	0.01412	0.9055
ROA does not Granger Cause CR		0.01284	0.9098
UD does not Granger Cause ROA	621	1.24883	0.2642
ROA does not Granger Cause UD		1.75522	0.1857

Source: Author's computation (2023)

The Pairwise Granger Causality Test result is presented in table 4.2 above, from the result it can be observed that among the independent variables only cash conversion cycle (CCC) and account receivable management (ARM) have a granger causal effect on return on assets. The relationship shows that there a unidirectional causal effect from the both the independent variables and return on assets which is similar to the finding from the correlation matrix.

Next, the study will proceed to present and discuss the pooled panel regression estimates. In terms of impact and causal effect, the regression analysis here will provide a more meaningful understanding of the impact of the independent variables on return on assets. The estimated model results are presented in the tables below.

Table 4
Pooled Panel OLS Regression Estimates

Dependent variable: ROA				
<i>Variable</i>	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>
C	2.655823	1.133052	2.343955	0.0194
CCC	-0.005634	0.002667	-2.112805	0.0350
ARM	0.005637	0.002667	2.113755	0.0349
APM	-0.005748	0.002649	-2.169854	0.0304
CR	0.336976	0.296107	1.138019	0.2555
UD	-0.035892	0.039348	-0.912178	0.3620
R-Squared	0.056523	F-Statistics (4, 280)	0.049626	
Adj. R-Squared	0.049626	Prob(F-statistic)	0.0000	
Observations	690			

Source: Author's computation (2023)

In table 4.4 above, the pooled panel regression is presented. From the panel regression estimates we observed that the constant term is positive and significant at the 5% level. This implies that when all the independent variables are held constant, returns on assets increases by about 27%. There exist a negative and significant relationship between cash conversion cycle (CCC) and returns on assets which is in consonance with apriori expectation. This implies that a 1% increase in cash conversion cycle reduces returns on assets by 0.005634%. Account receivable management (ARM) have a significant positive impacts on returns on assets which conforms to apriori expectation signifying that a 1% rise in account receivable management will increase returns on assets by about 0.005637%. Account payable management (APM) have a significant negative impacts on return on assets which conforms to apriori expectation implying that a 1% increase in account payable management will lead to a 0.005748% rise in returns on assets.

Also, current ratio (CR) have an insignificant positive impact on returns on assets which conforms to apriori expectation implying that a 1% increase in firm size will lead to a 0.336976% increase in returns on assets. Unpaid dividend displayed a negative insignificant impact on the returns on assets. This also conforms to apriori expectations as dividend can only be paid when profits are declared by a firm. Therefore a 1% increase in unpaid dividend brings about a reduction in returns on assets. The null hypothesis of the study states that cash conversion cycle, account receivable management and account payable management does not have any significant relationship or impact on the returns on assets of listed firms in Nigeria are rejected based on the above estimated results, the null hypothesis stating that current ratio and unpaid dividend does not have a significant impact on earnings management cannot be disproved thus we fail to reject the null hypothesis. Furthermore, looking at the joint significance (F-stat) of the model at 8.195624 with a p-value of 0.0000 reveals that the variables jointly have a strong explanatory power on returns on assets.

In econometric theory, cross-sectional or panel regressions can either have fixed or random effects and it is best to find out the appropriate output (either fixed or random) that best explains or estimates the specified model. In order to do this, the Hausman test is usually employed, and this will be done subsequently.

Hausman Test

As already pointed out, the Hausman test helps to determine the appropriate model to choose between the fixed effect and random effect model. This is important because after deciding which model is appropriate, we take a look at the coefficients of the model and see if their relationships and impacts on the dependent variable are in consonance with the model we estimated earlier.

The null and alternative hypotheses for the test are stated thus;

H₀: Random effect model is appropriate

H₁: Fixed effect model is appropriate

Table 5

Hausman Test

Correlated Random Effects - Hausman Test			
Equation: Untitled			
Test cross-section random effects			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	24.312847	5	0.0002

Source: Author's computation (2023)

The Hausman test result is presented in table 4.5 above. The null hypothesis of the Hausman test states that the random effects model is appropriate and also that there is no systematic difference in the coefficients of the fixed and random effects models. From the test result above, it can be seen that the chi-square test statistic of 24.312847 has a p-value of 0.0002 which is clearly lower than the 5% significance level so we reject the null hypothesis which states that the random effects model is appropriate. The fixed effects model is therefore presented in the table below.

Table 6

Random Effect Model

Dependent variable: LERM				
<i>Variable</i>	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>
C	-2.472332	1.529868	-1.616042	0.1066
CCC	-0.001265	0.003396	-0.372335	0.7098
ARM	0.001268	0.003396	0.373309	0.7090
APM	-0.001174	0.003404	-0.345009	0.7302
CR	0.460726	0.359096	1.283018	0.2000
UD	0.187261	0.066719	2.806707	0.0052
R-Squared	0.326679	F-Statistics (4, 280)	4.094085	
Adj. R-Squared	0.246886	Prob(F-statistic)	0.0000	
Observations	690			

Source: Author's computation (2023)

It can be seen from table 4.6 that in terms of direction and magnitude all the independent variables except unpaid dividend showed similar impact on returns on assets, the fixed effects model and the pooled panel regression model earlier estimated can be said to be strikingly similar. However, on the aspect of significance, only unpaid dividend showed significant impact on returns on assets, while the rest variables exhibited no significant impact with returns on assets. This further strengthened the findings from the Hausman test.

CONCLUSION AND RECOMMENDATIONS

This study examined Working Capital Management and Financial Performance of Listed Firms in Nigeria from sixty-nine (69) quoted firms in Nigeria. Several independent variables were employed for the purpose of the investigation namely; cash conversion cycle, account receivable management, account payable management, current ratio and unpaid dividend with returns on assets as the dependent variable. The statistical methods employed in this study includes descriptive statistics, correlation analysis, granger causality test, pooled panel Ordinary Least Square test, the Hausman test and the Fixed effect model, all of which were conducted at a significance level of 5%.

From the study, findings showed that the main variables that affect returns on assets significantly of publicly listed companies during the observed study period are cash conversion cycle, account receivable management and account payable management. Although, current ratio and unpaid dividend showed no significant impact. The findings suggested therefore that some aspects of working capital management have a significant impact on financial performance, while others do not. We can posit from the findings that firms can improve their financial performance by effectively managing their cash conversion cycle and accounts receivables and therefore optimizes their cash flows. More so, we can also deduce from the findings that accounts payable management is critical for robust financial performance. Also, an efficient account payable management is important for an accelerated financial performance in the Nigerian context. These

results have important implications for managers and policymakers in Nigeria. For managers, the study suggests that focusing on improving the cash conversion cycle and accounts receivable management may be an effective way to improve financial performance. For policymakers, the findings highlight the need to create an enabling environment that supports firms in effectively managing their working capital.

The following recommendations are made in light of the findings emanating from the study. There is need for firms operating in Nigeria to focus on improving their cash conversion cycle and accounts receivable management in order to enhance their financial performance. This can be achieved through effective management of working capital, such as optimizing inventory levels and managing payment terms with customers. Policies that create an enabling environment that can firms in Nigeria effectively manage their working capital should be at the forefront of policy formulation. This can be in form of improving access to finance, providing training and capacity-building support for managers, and promoting best practices in working capital management. Future research should consider expanding the scope of the study to include non-listed firms in Nigeria, as well as firms in other countries and regions. This would provide a more comprehensive understanding of the relationship between working capital management and financial performance in different contexts.

References

- Abanum, A.M., & Ebiaghan, O.F. (2022). Corporate governance attributes and tax aggressiveness nexus in the Nigerian non-financial firms. *Finance & Accounting Research Journal*, 4(3), 76-83, DOI:10.51594/farj.v4i3.384 Fair East Publishers
- Abbas, I.U., & Isiaka, A. (2021). Working capital management and financial performance of non-financial quoted companies in Nigeria. *International Journal of Research in Business and Social Science*, 10(3), 241–258.
- Abubakar, Y., Umaru, D., & Olowe, G.J. (2020). Working capital management and financial performance of selected quoted firms in Nigeria.
- Afam-Mebei, B. O., & Ebiaghan, O. F. (2022). Empirical nexus between corporate attributes and directors remuneration: Nigerian evidence. *Finance & Accounting Research Journal*, 4(3), 58-75. DOI:10.51594/farj.v4i3.385 Fair East Publishers
- Akbar, M., Wang, Z., & Akbar, A. (2020). The Interplay between Working Capital Management and a Firm's Financial Performance across the Corporate Life Cycle. *Sustainability*, 12, 1661. Doi:10.3390/su12041661w
- Angahar, P., & Alematu, A. (2014). Impact of Working Capital on the Profitability of the Nigerian Cement Industry. *European Journal of Accounting, Auditing and Finance Research*, 2(7), 17-30.
- Barine, M.N. (2012). Working Capital Management Efficiency and Corporate Profitability: Evidences from Quoted Firms in Nigeria. *Journal of Applied Finance & Banking*, 2(2), 215-237.
- Dong, H., & Su, J. (2010). The Relationship between Working Capital Management and Profitability: A Vietnam Case. *International Research Journal of Finance and Economics*, 49(3), 62-70.

- Ebiaghan, O.F. (2020). An assessment of the conceptual linkages between the qualitative characteristics of useful financial information and ethical behavior within informal institutions. *Economic Horizons*, 22(2), 137-148. Doi:10.5937/ekonhor2002145F
- Ebiaghan, O.F., & Emmanuel, E. (2018). Has the implementation of tax reforms improved the Federal Government non-oil internally generated revenue? *Kwararafa University Journal of Management Sciences(KUJOMS)*, 4(1), 76-92
- Ebiaghan, O.F. (2019). The deposit insurance scheme and the moral hazard hypothesis: Nigerian evidence. *Economic Horizons*, 21(3), 209-220. Doi:10.5937/ekonhor1903215F
- Ebiaghan, O.F. (2019). A comparative analysis of inflation-adjusted and historical cost accounting information: implications for the value relevance of corporate reports *trends. Economics And Management*, 33(1), 35–50. <http://dx.doi.org/10.13164/trends.2019.33.35>
- Ebiaghan, F.O., & Jerohn, E. (2020). Deposit insurance fund and the quality of risk assets of Nigerian deposit money banks. *Management Science Letters*, 10(5), 1129-1140. DOI: [10.5267/j.msl.2019.10.028](https://doi.org/10.5267/j.msl.2019.10.028)
- Ebiaghan, F.O., Ojugbeli, C., & Okoye, E. (2017). Toxic assets dilemma and the health of deposit money banks: assessing the performance of the asset management company of Nigeria (AMCON). *Journal of Social and Management Sciences*, 12(1), 127-138
- Godwin, O., Ailemen, I., Osabohien, R., Chisom, N., & Pascal, N. (2018). Working capital management and bank performance: empirical research of ten deposit money banks in Nigeria. www.businessperspectives.org
- Hermanson, R. H., & Edwards, J. D. (2005). Financial accounting: A business perspective, 9th edition Freeload Press [Online] Retrieved on January 25, 2016 from <http://www.textbookmedia.com/media/b8c39ca7-9501-4225-b328-758c2d1c35eb.pdf>.
- Hifza, M. (2011). Determinants of insurance companies profitability: an analysis of insurance sector of Pakistan. *Academic Research International*, 1(3) [Online] Retrieved on January 27, 2016 from [http://www.savap.org.pk/journals/ARInt./Vol.1\(3\)/2011\(1.3-32\)stop](http://www.savap.org.pk/journals/ARInt./Vol.1(3)/2011(1.3-32)stop).
- Iqbal, N., Ahmad, N., & Riaz, Z. (2014). The relationship between working capital management and profitability: evidence from Pakistan. *International Letters of Social and Humanistic Sciences*, 20, 14-25. www.scipress.com/ilshs.20.14
- Kargar, J., & Blumenthal, R. A. (1994). Leverage impact of Working Capital in Small Businesses. *TMA Journal*, 14(6), 46-53.
- Kiptoo, K., I. (2017). Working capital management practices and financial performance of tea processing firms in Kenya. A Research project submitted to the school of business and economics for the award of degree of master of business administration in the University of Embu. D530/1020/2013.
- Mabandla, Z. N. (2018). The relationship between working capital management and financial performance of listed food and beverage companies in South Africa, University of South Africa, Department of Business Management.
- Madugba, J. U., Ekwe, M., C. & Kalu, J., M. (2015). Corporate tax and revenue generation: Evidence from Nigeria. *Journal of Emerging Trends in Economics and Management Sciences (JETEMS)*, 6(5), 333-339.

- Makori, D.M., & Jagongo, A. (2013). Working capital management and firm profitability: empirical evidence from manufacturing and construction firms listed on Nairobi securities exchange, Kenya. *International Journal of Accounting and Taxation*, 1(1), 1-14.
- Mordi, J. U., & Ebiaghan, O. F. (2022). Earning management, firm size and institutional ownership: evidence from Nigerian manufacturing firms. *Finance & Accounting Research Journal*, 4(5), 310-325. DOI:10.51594/farj.v4i5.424 Fair East Publishers
- Nzete, P. O., & Ebiaghan, F.O. (2023). Off-Balance Sheet (Non-Financial) information disclosures and financial performance of quoted firms in the Nigerian industrial sector. *Gulf Journal of Advance Business Research*, 1(1), 73-81
- Obiekea, P. O., & Ebiaghan, O. F. (2023). An Assessment of the nexus between firm attributes and financial reporting quality In Nigeria. *International Journal of Applied Research in Social Science*, 5(7), 177-192. DOI: 10.51594/ijarss.v5i7.540
- Oburota, M.P., & Ebiaghan, O.F. (2023). Firm specific drivers of corporate social responsibility (csr) disclosure among oil and multinationals In Nigeria. *International Journal of Management & Entrepreneurship Research*, 5(7), 531-541. <https://doi.org/10.51594/ijmer.v5i7.517>
- Onoyenure, G., & Ebiaghan, O. F. (2023). An assessment of the determinants of earnings management in Nigeria. *International Journal of Management & Entrepreneurship Research*, 5(9), 681-694. DOI: 10.51594/ijmer.v5i9.550
- Okoye, L. U., Erin, O., Modebe, N. J., & Achugamonu, U. (2020). Working capital management and the performance of consumer and industrial goods sectors in Nigeria. 28th IBIMA Conference: Theme -Vision 2020: *Innovation Management, Development Sustainability, and Competitive Economic Growth*, 4408-4418.
- Orits-Ebigahan, R., & Ebiaghan, F.O. (2023). Tax revenue management and growth dynamics : Nigerian Evidence. *Journal of Academic Research in Economics*, 15(2), 423-439
- Oseifuah, E. (2018). Global financial crisis, working capital management and profitability of non-financial firms listed on the Johannesburg Stock exchange, South Africa, *International Academic Journal of Economics and Finance*, 2(1), 92-111.
- Owolabi, S. A., & Chituru, A. N. (2012). Effects of working capital management and profitability. A study of selected quoted manufacturing companies in Nigeria: *Economics and Finance Review*, 2(6) 55-67.
- Pandey, I. M. (2005). *Financial Management* (9th Ed.), New Delhi: Vikas Publishing House PVT Ltd.
- Petersen, M. A., & Rajan, R. G. (1997). Trade credit: Theories and evidence. *Review of Financial Studies*, 10, 661–691.
- Seiyaibo, C.M., & Ebiaghan, F.O. (2022). Environmental cost disclosure and corporate profitability: evidence from Nigerian Oil And Gas Firms. *Finance & Accounting Research Journal*, 4(4), 169-179. DOI:10.515941/farj.v4i4.399 Fair East Publishers
- Seiyaibo, C.M., & Ebiaghan, F.O. (2022) An Empirical Analysis of the Adoption and Execution Challenges of Transfer Pricing Regulations in Nigeria. *Journal of Academic Research in Economics*, 14(3), 562-577

- Umenzekwe, P. C., Okoye, E. I., & Aggreh, M. (2021). Working Capital Management and Financial Performance: Evidence from Selected Nigerian Manufacturing Firms. *Journal of Contemporary Issues in Accounting (JOCIA)*, 2(1), 1-10. <https://journals.unizik.edu.ng/jocia>.
- Yahaya, O. A., & Onyabe, J. M. (2021). Firm Life Cycle and Financial Performance: Evidence from Nigeria. *International Journal Accounting Research*, 6(1), 8-15.
- Yusuf, Y., & Sani, M. (2018). Working Capital Management Policy and the Financial Performance of Food and Beverages Companies in Nigeria. *International Business and Accounting Research Journal*, 2(2), 1-10.