

AN ASSESSMENT OF WORKING CAPITAL MANAGEMENT ON PERFORMANCE OF NIGERIAN LISTED PETROLEUM FIRMS

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Abstract

In this study, we empirically investigate the effect of working capital management on performance of Nigeria listed Petroleum firms. We hypothesize that Working capital management does not have significant influence on the financial profitability of Nigerian quoted petroleum companies. Our data set consist of petroleum firms listed in the Nigeria Stock Exchange for the period 2010-2015. Using Panel regression analysis, results indicate that the cash conversion cycle and all its major components; namely, inventory turnover in days, payable turnover in days and receivable turnover in days – are associated with the firm's profitability though some strongly does while others partially does. The results of this study should be of great importance to managers and major stakeholders, such as investors, creditors, and financial analysts.

Keywords: *working capital management; profitability; empirical*

INTRODUCTION

In Nigeria, for the past 5years, collapse of global oil price plus economy recession and the step down in the Nigeria economy has made the petroleum companies to be struggling which has led to halving its capital expenditure and boiling down its operational cost. Presently the petroleum companies are just trying to navigate through these difficulties (Ogbonna & Appah 2012). No company can underplay the potency of capital base; working capital is the heart of every organization, its generated funds and ensures efficient usage to sustain the financial environment of such an organization. Working capital is a vital element in any organizational setting that requires cogent attention, proper planning and management (Rosca and Thomas, 2013). As resources available to organizations are scarce, it is believed that the management of an organization's working capital has an important role to play in the achievement of profitability and overall edible financial performance of such an entity.

In this study, we empirically investigate the effect of working capital management on performance of Nigeria listed Petroleum firms. We hypothesize that Working capital management does not have significant influence on the financial profitability of Nigerian listed petroleum firms. Our data set consists of firms listed in the Nigeria Stock Exchange for the

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period 2010-2015. Using Panel regression analysis, results indicate that the cash conversion cycle and all its major components; namely, inventory turnover in days, payable turnover in days and receivable turnover in days – are associated with the firm's profitability though some strongly does while others partially does. The results of this study should be of great importance to managers and major stakeholders, such as investors, creditors, and financial analysts.

THEORETICAL REVIEW

Various theories over the years have been used by researchers to investigate the study of working capital; each one of them is as relevant as the other, they were used to predict the behavior of various working capital components. Some of these theories include:

Operating Cycle Theory: The flow concept of liquidity can be developed by extending the static balance sheet analysis of potential liquidation value coverage to include income statement measures of a firm's operating activity. In particular, incorporating accounts receivable and inventory turnover measures into an operating cycle concept provides a more appropriate view of liquidity management than that reliance on the current and acid-test ratio indicators of solvency. These additional liquidity measures explicitly recognize that the life expectancies of some working capital components depends upon the extent to which three basic activities- production, distribution (sales), and collection are non-instantaneous and un-synchronized (Uchenna and Okelue, 2012). Accounts receivable turnover is an indicator of the frequency with which a firm's average receivables investment is converted into cash. Changes in credit and collection policy have a direct impact on the average outstanding accounts receivable balance maintained relative to a firm's annual sales. Granting more liberal terms to a firm's customers creates a larger, and potentially less liquid, current investment in receivables.

Unless sales increases at least proportionately to the increase in receivables, this potential deterioration in liquidity will be reflected in a lower receivables turnover and a more extended receivables collection period. Decisions that commit a firm to maintaining larger average receivables investments over a longer time period will inevitably result in higher current and acid-test ratios (Tabachnik and Fidell, 2001). Inventory turnovers depict the frequency with which firms convert their cumulative stock of raw material, work-in-process, and finished goods into product sales. Adopting purchasing, production scheduling, and distribution strategies that require more extensive inventory commitments per dollar of anticipated sales produces a lower turnover ratio. This, in turn, reflects a longer and potentially less liquid inventory holding period. If firms cannot modify, either the payment practices established with trade creditors or their access to short-term debt financing provided by non-trade creditors, decisions that create longer or less liquid holding periods will again be accompanied by a higher current ratio indicator of solvency (Uchenna and Okelue, 2012).

The cumulative days per turnover for accounts receivable and inventory investments approximates the length of a firm's operating cycle. Incorporating these asset turnovers into an

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operating cycle concept of the current asset conversion period thereby provides a more realistic, although incomplete, indicator of a firm's liquidity position. The operating cycle concept is deficient as a cash flow measure in that it fails to consider the liquidity requirements imposed on a firm by the time dimension of its current liability commitments. Integrating the time pattern of cash outflow requirements imposed by a firm's current liabilities is as important for liquidity analysis as evaluating the associated time pattern of cash inflows generated by the transformation of its current asset investments (Tabachnik and Fidell, 2001).

Transaction Cost Economics Theory: Transaction cost theory is used to explain a number of different behaviors. Often this involves considering as transactions not only the obvious cases of buying and selling but also day to day emotional interactions and informal gift exchanges (Wihelm, 2013). The transaction cost theory suggests that there are certain costs that people normally incur without knowing that they are a cost to them. These costs must be incurred whenever a transaction takes place. These costs are known as transaction costs.

The idea that transactions form the basis of an economic thinking was introduced by John R. Commons in 1931 (Wihelm, 2013). Transaction cost theory focuses on transactions and costs that attend completing transactions by one institutional mode rather than another (Wihelm, 2013). The theory's central claim is that the transactions will be handled in such a way as to minimize the costs involved in carrying them out (Muathe et al 2014). A transaction, a transfer of good or service is the unit of analysis in transaction cost theory and the means of effecting the transaction is the principal outcome of interest (Wihelm, 2013). Accounts payable practices can be explained by transaction cost theory in that the loss in discounts from the suppliers is a cost to the debtor. The optimum level of inventory should be determined on the basis of a trade-off between costs and benefits associated with the levels of inventory. Costs of holding inventory include ordering and carrying costs. Ordering costs is associated with acquisition of inventory which includes costs of preparing a purchase order or requisition form, receiving, inspecting, and recording the goods received. However, carrying costs are involved in maintaining or carrying inventory and will arise due to the storing of inventory and opportunity costs. The most widely and simple motive of managing inventories is the cost motive, which is often based on the Transaction Cost Economics (TCE) theory (Daniel and Ambrose, 2013).

Cash Conversion Cycle Theory: The cash conversion cycle, which represents the interaction between the components of working capital and the flow of cash within a company, can be used to determine the amount of cash needed for any sales level. Gitman (1974) as cited by Adeniji, (2008) developed cash conversion cycle as part of operating cycle which is calculated by adding inventory period to accounts receivables period and then subtracting accounts payables from it. Its focus is on the length of time between the acquisition of raw materials and other inputs and the inflows of cash from the sale of finished goods, and represents the number of days of operation for which financing is needed. The CCC is a dynamic measure of ongoing liquidity

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management, since it combines both balance sheet and income statement data to create a measure with a time dimension (Adamu et al, 2015).

While the analysis of an individual firm's CCC is helpful, industry benchmarks are crucial for a company to evaluate its CCC performance and assess opportunities for improvements because the length of CCC may differ from industry to industry. Therefore the correct way is to compare a specific firm to the industry in which it operates (Onodje, 2014). The cash conversion cycle is used as a comprehensive measure of working capital as it shows the time lag between expenditure for the purchase of raw materials and the collection of sales of finished goods (Albert et al, 2013). Day-to-day management of a firm's short term assets and liabilities plays an important role in the success of the firm. Firms with growing long term prospects and healthy bottom lines do not remain solvent without good liquidity management (Jose and Lancaster, 1996). By approximating these three periods with the financial ratios of inventory days, trade receivables days and trade payables days, the length of the cash conversion cycle (CCC). Cash conversion cycle is measured by adding inventory days and trade receivable days and subtracting trade payable days.

The firm's ongoing liquidity is a function of its cash conversion cycle, hence the appropriateness of evaluation by cash conversion cycle, rather than liquidity measures. According to Arnold (2008) the shorter the CCC, the fewer are the resources needed by the company. So the longer the cycle the higher will be the investment in the working capital. But also a longer cycle could increase sales, which could lead to higher profitability. But this longer cycle, will also lead to higher investment and could rise faster than the benefits of the higher profitability.

They also argued that a longer cash conversion cycle might indicate that a company's sales are rising and that the company can compete by having lax credit policies or high inventories. But on the contrary, a higher CCC can actually hurt a company's profitability by increasing the time that cash is tied to non-interest bearing accounts such as accounts receivables. By shortening the CCC the company's cash flows will have a higher net present value because cash is received quicker. The number of days accounts receivables; inventories and accounts payables are used as the operationalization of the management of trade credit and inventory (Adamu et al, 2015).

EMPIRICAL REVIEW

Many researches were conducted in the area of working capital management and profitability, the result of which shows divergent conclusions. Every firm invest in working capital, therefore there is a way in which working capital is managed of which will have a significant impact on the profitability of firms. Few of the empirical work in this area are highlighted as follows; Onodje (2014) performed analysis on whether the internal financial activity of working capital management affects the performance of Nigerian manufacturing companies. The study used 75 manufacturing firms quoted on the Nigerian Stock Exchange (NSE). Three alternative regression methods; namely fixed effect, random effect, and one-step difference GMM were used for

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analysis. The researcher found out that working capital management is an important determinant of manufacturing firm's performance in Nigeria of which receivable conversion period and inventory conversion period are directly or positively related to manufacturing performance but payable deferral period, cash conversion cycle and the debt-equity ratio period are inversely or negatively related to manufacturing performance. Additionally, liquidity (measured as quick ratio) has no significant relationship with manufacturing performance.

Meleta, Maria and Petros (2010) studied the effect of working capital management on firm's financial performance in an emerging market. The study used 43 industrial firms listed in the Cyprus Stock Exchange for the period 1998-2007. Multivariate regression Model was used for analysis. The researcher found out that the cash conversion cycle and all its major components; namely, days in inventory, day's sales outstanding and creditors' payment period are associated with the firm's profitability.

Ani, Okwo and Ugwunta (2013) carried out analysis on a more robust horizon of knowledge aside the normal effect of working capital on manufacturing firms performance, to investigate how the individual components of the CCC (cash Conversion Cycle) influence the profitability of world leading beer brewery firms. The study used top four largest brewers as acknowledged by Reuters Reporters, The Barth Report, and eHow.com in their respective 2010 top world largest brewers' reports for the period 2000-2011. Functional form of the regression equation adopted is the linear equation (model) stated in a multiple form were utilized to a cross sectional time series data. The researcher found out that working capital management as represented by the cash conversion cycle, sales growth and lesser debtors' collection period impacts on beer brewery firms' profitability.

Adamu and Hussaini (2015) empirically researched the effect of working capital management of Deposit Money Banks in Nigeria. The study used sixteen (16) deposit money banks that are listed on the Nigerian Stock Exchange (NSE) as recorded in the NSE Fact Book of 2013 for the period of 2007-2013. Multiple regressions were employed to test the model of the study using OLS for the analysis. The researcher findings revealed that a strong positive relationship between current ratio and quick ratio and ROA of Listed Deposit Money Banks in Nigeria, while cash ratio was found to be inversely but significantly related to ROA of Listed Deposit Money Banks in Nigeria.

Albert and Michael (2013) analyzed effect of working capital management (WCM) on firms' performance for non-listed Ghanaian firms. The study used 125 non listed Ghanaian firms for a period of six years from 2004 – 2009. Panel data methodology was employed to capture the effects of working capital management on profitability for the selected companies with four different regression models estimated for the analysis. The researcher discovered that managers can create value by reducing their firm's number of day's accounts receivable and inventories,

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Also added that performance is affected positively by the firms' size, GDP growth and firms' sales growth.

Adamu (2016) examined the effect of working capital management on the financial performance of pharmaceutical firms in Nigeria. The study used six (6) Pharmaceutical Firms that are listed on the Nigerian Stock Exchange (NSE) as recorded in the NSE Fact Book of 2013 from 2006-2013. Panel Fixed effect and Random effect model were conducted to test the model of the study; Longitudinal panel data used to account for individual heterogeneity of the sample firms; Simple regression was used in determining the level of working capital management influence on performance of listed Pharmaceutical Firms in Nigeria; Fixed and Random effect Regression model were estimated using Stata 10 as a tool for the analysis. The researcher found out that both account receivables and inventory were significantly and positively related with financial performance while account payable was found to be significantly but negatively related to financial performance and cash conversion cycle was found to be statistically insignificantly related to financial performance. The study concluded that both account receivables and inventory have significant, strong and positive influence on the financial performance of listed pharmaceutical firms in Nigeria, while account receivables has significant but negative influence on the financial performance of pharmaceutical firms.

RESEARCH METHODOLOGY

The research study employed the use of secondary data. The secondary data was source from financial statements of listed petroleum firms. These data include audited balance sheet and profit and loss accounts showing annual financial statements of the sampled companies. The data were collected for a period of six years. The period of the data collection was from the years 2010 to 2015.

Data Analysis Techniques

To determine the effect of working capital management on profitability of listed petroleum firms, Ordinary Least Square (OLS) regression model is employed as in (Ojeani, 2014). Panel data is used in examining changes in variables over time and differences in variables between subjects. In view of the panel nature of the data (cross-sectional and time series) for the study, the study employed different regression models, which include ordinary least squares (OLS) model and Fixed Effect (FE) Model. Appropriate tests such as hausman specification test for fixed effects are used to in arriving at the most suitable model for the study (OLS model). The study on the other hand conducted robustness tests to ensure the validity and fitness of the results. This includes test for heteroskedasticity, autocorrelation and multi-collinearity, this is an efforts to comply with the classical assumption of OLS and the model of the study in general. The analysis is conducted using STATA version.

Model Specification

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The model uses return on asset (ROA) as dependent variable and four independent variables, which includes inventory turnover in days (ITD), receivable turnover in days (RTD), payable turnover in days (PTD) and cash conversion cycle (CCC). ROA is reliable in studying the effect of working capital management on firm's profitability because (1) it measures only the performance of the operating activities of a firm, this is because the measurement of the return on asset which is Net income/profit divided by total asset (Lazaridis & Tryfonidis, 2006; Gill et al., 2010), (2) it is based on the fact that this measurement focuses on the efficiency and effectiveness of operations of the firm. This is because it includes the income gained through the financial activities by firms, and (3) it reflects to investors the best choice of firm to invest into. ROA is calculated as follows. The model of this study is supported by the cash conversion cycle theory which appropriately evaluates accounts receivables; inventories and accounts payables with cash conversion cycle (Lazaridis & Tryfonidis, 2006; Deloof, 2003)..

ROA = (Net income/profit divided by Total Asset).

We specify our model as:

$$\text{ROA}_{it} = \alpha_0 + \beta_1 \text{ITD}_{it} + \beta_2 \text{RTD}_{it} + \beta_3 \text{PTD}_{it} + \beta_4 \text{CCC}_{it} + \text{E}_{it}$$

Where:

ITD_{it} = Inventory turnover in days of firm i in year t

RTD_{it} = Receivable turnover in days of firm i in year t

PTD_{it} = payable turnover in days of firm i in year t

CCC_{it} = Cash Conversion Cycle of firm i in year t

E_{it} = error term of firm i in year t

α₀ = is the intercept

β₁-β₄ = coefficient of independent variables

EMPIRICAL RESULTS

Correlation Analysis

Table 1 Correlation Matrix

	ROA	ITD	PTD	RTD	CCC
ROA	1				
ITD	0.6616	1			
PTD	0.8580	0.9360	1		
RTD	0.4846	0.8421	0.7441	1	
CCC	-0.9078	-0.5686	-0.8108	-0.2622	1

Source: STATA version 8.0, 2017

Table 1 depicts the correlation matrix of the independent variables (payable turnover in days (PTD), inventory turnover in days (ITD), and cash conversion cycle (CCC), and receivable

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turnover in days (RTD) and the dependents (return on assets) employed in this study. Correlation between the same variable is one, correlation value of 0.5 and above implies strong correlation, while below 0.5 implies weak correlation. Positive sign implies direct correlation while negative sign implies indirect correlation. This correlation matrix reflects the relative strength of the linear relationship between these explanatory variables with the dependent variable.

Therefore, Table 5.1 revealed that inventory turnover in days (ITD) is strong and positively correlated with return on assets (ROA) having correlation coefficient of 0.66. Similarly, Payable turnover in days (PTD) is positive and strongly correlated with return on asset having correlation coefficient of 0.86. Also, receivable turnover in days (RTD) is positive and weakly correlated with return on assets having correlation coefficient of 0.48. However, cash conversion cycle (CCC) is strong and negatively correlated with return on assets having correlation coefficient of 0.91.

Test for Multicollinearity

For proper analyses to be made, it is assumed that there is correlation between your independent variables. According to Gujarati (2004), multicollinearity could only be a problem if the pair-wise correlation coefficient among regressors is above 0.80, other researchers adopt 0.9 (Cohen, 1988). Thus, from the analysis above, the assumption of multicollinearity is not violated.

Hence, from the above there is a relationship between working capital management (measured by ITD, PTD, RTD and CCC) and profitability (measured by ROA) at r- value between 0.80 and 0.9, indicating that the more efficient the measure for working capital management is maintained, the higher the level of profitability of the firm. This is consistent with a prior expectation and consistent with other research work. Thus, the study rejects the null hypotheses (H_0) and accepts the alternative hypothesis (H_1) that working capital management has significant influence on the financial profitability of Nigerian quoted petroleum companies

Regression Analysis

Table 2: Fixed Effect

Dependent Variable: ROA

Method: Panel Least Squares

Sample: 2010 2015

Periods included: 6

Cross-sections included: 5

Total panel (unbalanced) observations: 28

Variable	Coefficient	Std. Error	t-Statistic	Prob.
PTD	0.000240	5.01E-05	4.792734	0.0001
RTD	0.000217	0.000903	0.240463	0.8144
ITD	0.000172	3.53E-05	4.866314	0.0001
CCC	-0.000209	5.89E-05	-3.557901	0.0020

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C	-0.513979	0.144925	-3.546523
	0.0020		
Effects Specification			
Cross-section fixed (dummy variables)			
R-squared	0.944760	Mean dependent var	0.098736
Adjusted R-squared	0.925426	S.D. dependent var	0.493101
S.E. of regression	0.134657	Akaike info criterion	-0.937221
Sum squared resid	0.362648	Schwarz criterion	-0.556591
Log likelihood	21.12109	Hannan-Quinn criter.	-0.820858
F-statistic	48.86555	Durbin-Watson stat	2.179206
Prob(F-statistic)	0.000000		

The fixed effect regression estimated results presented in Table 5.3 indicate that the independent variables (payable turnover in days (PTD), inventory turnover in days (ITD), cash conversion cycle (CCC), and receivable turnover in days (RTD)) jointly explained 92.5 percent variations in the dependent variable (return on asset (ROA)). Also, the probability of F-statistic of 0.00 is less to 0.05 which indicate that the fixed regression model is statistically significant at 5 percent. Thus, there is linear relationship between the independent variables and the dependent variable in pool regression model.

The probability value of PTD (0.0001), CCC (0.002) and ITD (0.0001) are individually less is than 0.05, thus, payable turnover in days (PTD), inventory turnover in days (ITD) and cash conversion cycle (CCC) exert statistically significant influence on return on asset at 5 percent significantly level. However, the probability value of receivable turnover in days (0.16) is individually more than 0.05, thus it is exert statistically insignificant influence on return on asset at 5 percent significance level. Specifically, 1 unit increase in PTD significantly induce 0.00024 unit raise in return on assets while 1 unit increase in ITD significantly induce 0.0001 unit raise in return on assets. Similarly, 1 unit increase in CCC significantly induce 0.00021 unit fall in return on assets. But, 1 unit increase in RTD insignificantly induce 0.0021 unit raise in return on assets. The fixed effect regression estimated results presented in Table 4.4 indicate that the independent variables (payable turnover in days (PTD), inventory turnover in days (ITD), and cash conversion cycle (CCC), and receivable turnover in days (RTD) jointly explained 92.5 percent variations in the dependent variable (return on asset (ROA)). Also, the probability of F-statistic of 0.00 is less to 0.05 which indicate that the fixed regression model is statistically significant at 5 percent. Thus, there is linear relationship between the independent variables and the dependent variable in pool regression model.

The probability value of PTD (0.0001), CCC (0.002) and ITD (0.0001) are individually less is than 0.05, thus, payable turnover in days (PTD), inventory turnover in days (ITD) and cash

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conversion cycle (CCC) exert statistically significant influence on return on asset at 5 percent significantly level. However, the probability value of receivable turnover in days (0.16) is individually more than 0.05, thus it is exert statistically insignificant influence on return on asset at 5 percent significance level. Specifically, 1 unit increase in PTD significantly induce 0.00024 unit raise in return on assets while 1 unit increase in ITD significantly induce 0.0001 unit raise in return on assets. Similarly, 1 unit increase in CCC significantly induce 0.00021 unit fall in return on assets. But, 1 unit increase in RTD insignificantly induce 0.0021 unit raise in return on assets.

Table 3: 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	12.697458	3	0.0053

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
PTD	0.000031	0.000065	0.000000	0.0004
ITD	0.000038	-0.000080	0.000000	0.0004
RTD	0.000209	0.000012	0.000000	0.0004
CCC	0.000209	0.000012	0.000000	0.0004

The decision on whether the random effects (RE) model or fixed effects (FE) model was an appropriate model for this study depended on whether the individual effect were fixed or random. A comparison of the consistent fixed-effects with the efficient random-effects estimates using the Hausman specification test, accept alternate hypothesis of fixed effect estimates at $p < 0.05$ and reject the random-effects model. Since the p-value of Chi-square (0.005) is less than 0.05. Thus, the discussions of these findings are based on fixed effects results, this suggests that variance across the selected firms is zero with significant fixed difference across unit (that is there is no panel effect). Therefore, the discussions of this study are based on the fixed-effects regression estimate results.

Therefore, from the fixed effect regression, payable turnover in days (PTD) and inventory turnover in days (ITD) exert positive and significant effect on profitability using return on asset while cash conversion cycle (CCC) exert inverse and significant influence on profitability of the

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sampled companies. However, receivable turnover in days (RTD) exert positive and insignificant influence on profitability using return on asset of the sampled companies.

IMPLICATION OF RESULT

Following the result, this result implies that:

From Correlation matrix: ITD is seen to be strong and positively correlated with ROA meaning that if ITD is efficiently and effectively monitor in moderacy, it would yield profitability of firm but if otherwise i.e. the conversion period of cumulative stock of raw material, work in progress and finished goods into product sales is not modify, it will result as an indicator of insolvency to the firm in accordance to operating cycle theory. Unlike RTD which is seen to be positive but weakly correlated with ROA meaning that frequency with which a firm's average receivables investment is converted into cash (RTD) does not necessarily affect ROA of which it is supported by operating cycle theory. While PTD depicts strong and positively correlated with ROA of which Accounts payable practices can be explained by transaction cost theory in that the loss in discounts from the suppliers is a cost to the debtor which affirm with transaction cost economic theory. CCC results shown that it is strong enough but negatively correlated to ROA i.e. the interaction between the components of working capital and the flow of cash within a company, can explicitly determine the profitability of the firm as regards to showing the time lag between expenditure for the purchase of raw materials and the collection of sales of finished goods, therefore day-to-day management of a firm's short term assets and liabilities plays an important role in the success of the firm (According to Arnold (2008) the shorter the CCC, the fewer are the resources needed by the company. So the longer the cycle the higher will be the investment in the working capital. But also a longer cycle could increase sales, which could lead to higher profitability. But this longer cycle, will also lead to higher investment and could rise faster than the benefits of the higher profitability). This is supported by cash conversion cycle theory.

In summary, the aforementioned results confirm our expectations; i.e., that the components of the cash conversion cycle, if managed efficiently, add value to the firm since they increase firm's profitability.

CONCLUSION

Working capital is one of the most important measurements of the financial position, which is like a life-blood and nerve centre of any business entity. This necessitated the need for the careful management of working capital in every business organization with the value maximization objective. Although the study shows that there is a strong, significant relationship between the working capital components; payable turnover in days, receivable turnover in days, inventory turnover in days and return on total assets but there are still multitude of other variables that also affect return on total assets. On basis of the above analysis this study may further conclude that these results can be further strengthened if more control variables are

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introduced into the model. If these firms properly manage their cash, accounts receivables and inventories in a proper way, this will ultimately increase profitability of these companies.

RECOMMENDATION

In line with the findings and conclusions from this study, the study makes the following recommendations:

- i. The managers of Petroleum firms in Nigeria should give due importance to working capital management, and emphasize an optimal working capital levels in their respective firms. This is because of the positive impact of payable and inventory turnover on the profitability.
- ii. The managers of Petroleum firms should decrease their days' receivable turnover in days' accounts turnover cycle which positively affects the profitability of the firm.
- iii. The result suggests that Petroleum firms should keep optimum level of payable turnover and cash conversion cycle to increase profitability. This could only be possible when Petroleum firms give due regard to every component of working capital.
- iv. The managements of Petroleum firms should involve in credit terms bargaining with their suppliers in order to optimize their payable turnover efficiency which could improve profitability and liquidity positions.

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