WORKING CAPITAL MANAGEMENT PRACTICES
AND PROFITABILITY IN NIGERIA

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JEL G30, 39	Abstract
	The paper investigates the effect of working capital management practices on profitability of twenty-five Nigerian listed non-financial firms between financial years, 2010 and 2016. Pooled ordinary least squares (POLS) and Random effects generalised least squares (REGLS) were employed as data analytical tools. Result indicates that three of the components of working capital management practices (average collection period, inventory turnover period and cash conversion cycle) have significant influence on profitability of Nigerian firms. It therefore suggests that proper management of components of working capital is a means by which profitability and shareholders' value can be increased. The outcome provides empirical evidence that Nigerian firms used aggressive policy as a working capital management practice in achieving organisational success during the period of study.
Keywords: Aggressive policy, Cash conversion cycle, Nigeria, Profitability, Working capital.	

Introduction

Working capital can be described as the difference between current assets and liabilities that are due for payment within a year, i.e. current liabilities. It is necessary because of the time lag between purchases of items relevant for the production of goods were made and finished goods were sold. The efficient management of these two varia-

bles in such a way that will enhance liquidity, profitability and shareholders' wealth is therefore essential for any business entity, especially manufacturing companies, whose inventories constitute between 50% and 70% of their total assets.

Efficiency in the management of working capital requires both scientific and professional knowledge and skill in the determination of the optimum working capital items necessary in the operating cycle and the amount to be invested at any point in time. If this level is achieved, the potential risk of under or over investment in working capital is completely eliminated; it will also help in boosting shareholders' value (Aktas, Croci and Petmezas, 2015); and guarantee stability, reliability, growth and consistency of the firm (Khatik & Varghese, 2015).

In financial management literature the importance of profit maximization as an objective of a business entity and liquidity management are well documented. This is the reason why corporate entities try as much as possible to make profit year –in-year- out. It is out of the profit that providers of capital will be compensated in the form of dividend payment. Also, potential investors will only be interested in businesses that are profitable so as to ensure adequate returns on their investments. Liquidity, on the other hand, is essential so as the operation of the firm is not disrupted. An organization with liquidity problems will find it extremely difficult to discharge its outstanding short-term bills and this may affect production, sales, contribution and profit. This implies that the organization should manage its working capital in order to reach a compromise between liquidity and profitability as both are important for any entity's survival and growth.

The problem statement of this study involves corporate managers' ability to balance the liquidity-profitability nexus. This is viewed from two angles. Firstly, both over and under investment in working capital are not ideal as sales and profitability are affected negatively. Secondly, an organization that is profitable does not mean that the organization is liquid. How the management tackles the twin issue of profitability-liquidity nexus using working capital management practices to impact on profitability, is the major concern of this study.

Attention of researchers on studies of the roles of finance managers in corporate organisations, as documented in literature, leans towards long –term finance issues, such as capital structure and dividend policy. Fewer efforts have been devoted to short-term finance studies, of which working capital is paramount. In Nigeria for instance, attempts have been made at working capital management studies by Olufisayo (2007), Onwumere, Ibe and Ugbani (2012), Nwidobie (2012), Oladipupo and Okafor (2013), Angahar and Alematu (2014) and Osundina (2014). However, most of the findings of these studies are mixed and unclear. This might be due to

different measurement proxies used to capture working capital and financial performance; diverse methodologies and study time frame.

The primary objective of this study was to empirically examine the effect of working capital management practices on the profitability of Nigerian firms. Specifically and in line with what was obtained in prior studies, the effect of four working capital management practices- average payment period, inventory turnover period, average payment period and cash conversion cycle on profitability were investigated.

This present study tried to mitigate the shortcomings noticed in prior studies (such as, Owolabi and Alu, 2012 and Nwodobie, 2012) by using data from five sectors for seven-year period and perhaps better data analytical tools.

1. Theoretical framework

Modern working capital management theories are predicated on risk/return trade-off among different feasible strategies (Moyer, McGuigan & Kretlow 2006). Here, two alternative strategies of managing working capital are proposed. These are aggressive and conservative working capital strategies.

Aggressive working capital policy requires, for instance, establishing a tight credit line and collection procedure for customers. Overall, the investment in working capital will be kept at a low level. Although, most of the marginal customers may be adversely affected, this policy yields higher returns and higher risk. Empirically, an organisation that adopts an aggressive working capital is expected to have an inverse association between cash conversion cycle (CCC) and profitability.

Conservative working capital policy is identified with lower returns and lower risk (Ahanga & Shah, 2017). This policy involves commitment of huge sum to working capital with the hope that this will yield higher returns. For instance, inventories will be at high level as this guarantees smooth production process and sales. The increased sales lead to increased contribution and profit. The debt collection procedure is a bit relaxed, as customers will be given enough time to consider and distinguish between different products purchased (Deloof and Jegers, 1996) and verify quality of product before bills are paid (Lee and Stowe, 1993), thereby strengthening the long-term relationship with customers (Wilmer, 2000 cited in Ahanga & Shah, 2017). Empirically, a positive signal is expected between CCC and profitability.

In determining the working capital management approach in use by firms in different countries of the world several studies were conducted. Several such studies are briefly discussed in turn.

Owolabi and Alu (2012) examined the extent to which working capital management practices influence the profitability of five Nigerian listed firms over the period 2006 to 2010. Findings revealed that each of the components affected the company's profitability at varying levels but these results produced insignificant effect when the different components were combined together as a pool.

Rehn (2012) assessed the effects of working capital management on profitability of 1,789 manufacturing organisations in Sweden and Finland during the period 2002-2010. Pooled ordinary least squares result revealed that CCC and net trade cycle have significant effects on corporate profitability.

Onodje (2014) used data from 75 listed Nigerian manufacturing firms for the period from 2002-2011 to determine whether working capital management affects profitability. The results of 3 different data analytical tools used revealed that CCC was inversely related to financial performance.

Konak and Guner (2016) studied the impact of working capital management on performance of 29 companies listed in Bursa Istanbul SMEs industrial index, Turkey for the period covering 2011-2014. Result of the pooled OLS technique indicated an inverse association between net margin and CCC, short term debt and turnover in days.

Lyngstadas and Berg (2016) explored the influence of working capital management on profitability of 21, 075 Norwegian companies for 2010-2013. The result of panel regressions analysis showed that working capital management proxies (inventory held, debtor payment period and account payable) individually and collectively had influence on profitability of sample firms.

Yunos, Ahmad, Ghapar and Sungi (2018) assessed the effect of working capital management on performance of 803 Malaysian companies during financial years covering 2010-2014. Fixed effects model was adopted as estimation tool and results revealed that inventory turnover and account receivable in days have inverse effect on ROA and Tobin's Q. Account payable days and CCC have no influence on performance.

Korent and Orsag (2018) used data from 442 software companies in Croatia for 2008-2013 to investigate the impact of working capital management on profitability. Regression result showed a nonlinear, concave quadratic association between working capital and profitability (ROA).

Al-Abass (2018) studied the effect of working capital management on profitability of 30 listed companies in three sectors of Pakistan for the period 2001-2016. The simple pooled OLS result indicated an indirect association between CCC and ROA.

2. Methodology and data

2.1. Research design and source of data

The study adopted an ex-post facto research design using published historical data to establish the link between the two variables in Nigerian firms. Data were gathered from secondary source published annual financial statements and accounts of the selected companies. These accounts were available on the websites of the selected firms and Nigerian Stock Exchange Fact Book.

2.2. Population, sample and sampling technique

The study population consists of 105 listed non-financial companies in eight sectors of the Nigerian Stock Exchange as of June 30, 2018. With the adoption of purposeful sampling technique, twenty-five firms in five sectors (consumer goods/services, industrials, oil & gas, basic materials and health care), which represented about 24% of the population and which provided complete data set necessary for the study were selected as sample.

2.3. Data analysis instrument

Panel data methodology and multiple regression method were employed for data analysis. In line with some prior studies (see Rehn, 2012, Khamrui and Bagchi (2012), Konak and Guner, 2016, Lyngstadas and Berg, 2016 and Al-Abass, 2018), pooled OLS was used as estimation technique.

2.4. Variable description and development of hypotheses

Dependent variable

Return on assets (ROA): It is an accounting-based measurement of management's efficiency in the use of resources entrusted with them by the owners of the business. It is mostly used in the literature as a proxy for profitability (Raheman, Afza, Qayyum, & Bodla, 2010, Owolabi & Alu, 2012, Makori & Jagoogo, 2013, Lyngstadas & Berg, 2016, Konak & Guner, 2016 and Yunos et al. 2018). This study adopted ROA as the only dependent variable.

Independent variables

The study employed four different variables as surrogates of working capital management practices. These are classified as independent variables and are briefly discussed in turn:

Average collection period (ACP): In order to increase sales, corporate organisations usually extend credit facilities to willing customers. This usually occurs when new products are introduced into the market and when intense competition within the industry demands it. However, if the collection of debts outstanding is not properly managed, the long- run survival of the organization may be affected. Thus, reduction in ACP is expected to increase profitability (Mathuva, 2010, Vahid, Ejham & Ebrati, 2012, Abdullah, 2014, Pais & Gama, 2015, Konak & Guner, 2016, Lyngstadas & Berg, 2016 and Yunos *et al*., 2018). The following null hypothesis is developed:

H_{o1}: Average collection period has no significant relationship with profitability.

Inventory turnover period (ITP): This is simply the number of days taken to hold inventories before they are sold. Inventories are necessary for production of goods and this must be properly managed. Inadequate inventories result in stock-out and production will be impaired leading to loss of sales, contribution and profit. On the other hand, huge inventories level results in unnecessary tying up capital, which would have been used to generate returns. Also, it may lead to wastage if finished goods remain unsold and got spoilt. Some empirical studies, such as the ones done by Afeef (2011), Napompech (2012), Almazari (2014), Rezaei and Pourali (2015) and Yunos, *et al*. (2018), revealed an inverse association between ITP and profitability. Hence, an inverse signal between ITP and profitability is expected. The following null hypothesis is developed:

H_{o2}: Inventory turnover period has no significant relationship with profitability.

Average payable period (APP): This is defined as the time it will take a business organisation to offset bills outstanding. Corporate organisations do obtain credit facilities, especially from suppliers of raw materials and other consumables needed for production of goods. This invariably assists these organizations in utilizing funds which would have been paid now (on cash basis and with or no discounts) to other ventures. Thus, most organisations make best use of this mode as a short-term finance source by delaying payments to providers of credit facilities. However, proper management of accounts payable is very important. This is because if the company fails to meet up with its obligations as at when due, the provider of the facility may cut the level of credit facility to be granted in the future or resort to outright blacklisting of the organsation by removing it from the list of credit worthy customers. Consistent with some prior studies (see Sabri, 2012, Zakaria and Amin, 2013, Makori and Jagongo, 2013, Agha, 2014, Abdullah, 2014 and Rezaei and

Pourali, 2015), a direct relationship between APP and ROA is expected. The following null hypothesis is developed:

H_{o3}: Average payment period has no significant relationship with profitability.

Cash conversion cycle (CCC)**:** This is the period between cash outflows that result from purchase of materials and cash inflows from sales of finished goods. CCC is considered by Richards and Laughlin (1980) cited in Yunos, *et al*. (2018) as the prominent measurement of working capital management and a standard measure of operational efficiency of firms. All the constituents of other working capital management practices (ACP, ITP and APP) constitute the CCC. A good understanding of CCC requires that if all the three constituents are properly managed, then CCC will have impact on profitability and enhance the wealth of shareholders. Most evidences in empirical literature supported a negative relationship between CCC and profitability (see Dong & Su, 2010, Vural, Sokmen & Cetenak, 2012, Makori & Jagongo, 2013, Zakaria & Amin, 2013, Rezaei & Pourali, 2015 and Konak & Guner, 2016). The study therefore expects an inverse effect of CCC on profitability. The following null hypothesis is developed:

H_{o4}: Cash conversion cycle has no significant relationship with profitability.

Control variables

In order to make an unbiased inference, four parameters that are likely to have effect on profitability are introduced in this study as control variables. If control variables are not included, the likelihood of making bias inference will be high. The control variables are current asset to total asset ratio (CATAR), current liability to total asset ratio (CLTAR), current ratio (CR) and size (SZ).

2.5. Model specification

Panel data methodology was adopted as a result of the panel character of data. Specifically, the study's models are as stated in equations 2.1a, 2.1b, 2.1c and 2.1d:

Model 1: $ROA_{it} = \beta_0 + \beta_1 ACP_{it} + \beta_2 CATAR_{it} + \beta_3 CLTAR_{it} + \beta_4 CR_{it} + \beta_5 SZ_{it} + e_{it}\ldots$ (2.1a)

Model 2: $ROA_{it} = \beta_0 + \beta_1 ITP_{it} + \beta_2 CATAR_{it} + \beta_3 CLTAR_{it} + \beta_4 CR_{it} + \beta_5 SZ_{it} + e_{it}\ldots$ (2.1b)

Model 3: $ROA_{it} = \beta_0 + \beta_1 APP_{it} + \beta_2 CATAR_{it} + \beta_3 CLTAR_{it} + \beta_4 CR_{it} + \beta_5 SZ_{it} + e_{it\ldots}$ (2.1c)

Model 4: $ROA_{it} = \beta_0 + \beta_1 CCC_{it} + \beta_2 CATAR_{it} + \beta_3 CLTAR_{it} + \beta_4 CR_{it} + \beta_5 SZ_{it} + e_{it}\ldots$ (2.1d)

Where, all the variables are as defined in Table 1.

2.6 Measurement

Table 1 depicts the measurement of the study's variables.

Table 1

Variable Measurement

Variable	Abbreviation	Measurement	*a priori* signal
Return on assets	ROA	Profit after tax / Total asset	
Average collection period	ACP	Debtors x 365 / Net sales	-
Inventory turnover period	ITP	Closing inventory x 365 / Cost of goods sold	-
Average payment period	APP	Creditors x 365 / Purchases	+
Cash collection cycle	CCC	ACP + ITP - APP	-
Current asset to total asset ratio	CATAR	Current asset / Total asset	+
Current liability to total asset ratio	CLTAR	Current liability / Total asset	-
Current ratio	CR	Current asset / Current liability	+
Size of the firm	SZ	Log of total asset	+

Source: *Adapted from relevant empirical literature (2018).*

3. Results and discussion

3.1. Descriptive statistics

Descriptive statistics results are reported in Table 2. It reveals that average ROA is 6.8% and this ranges between -19.2% and 33.3%. Average collection of debts outstanding of the sample firms is 52 days and this takes between about 1.4 days and about 411 days to be collected. It takes inventories to stay in the warehouse before being sold between 12 days and 603 day, with an average period of 137 days. The firms spend an average of 68 days to offset bills and this ranges between 1 day and about 395 days.

Table 2

Summary of Descriptive Statistics

Variable	Mean	Minimum	Maximum	Standard Deviation
ROA	0.068	-0.192	0.333	0.074
ACP	52.413	1.400	410.570	53.734
ITP	137.470	12.290	603.110	110.074
APP	68.208	1.080	394.600	77.005
CCC	133.970	-250.220	602.330	133.131
CATAR	0.630	-0.200	0.996	0.192
CLTAR	0.502	0.058	0.950	0.193
CR	1.400	0.350	4.650	0.634
SZ	9.783	8.196	12.699	0.782

Source: Authors' computation (2018).

The time lag between the purchases of inventories and the cash received from sales (CCC), on the average is about 134 days. The average current ratio (CR) is 1.4:1 (which is below the acceptable threshold of 2:1), although it is as high as 4.65:1 for some firms. Firm size is about N6.2 billion or US$20 million (log inverse 9.783). Current asset to total asset ratio (CATAR) has an average of 0.63 and that of current liability to total asset ratio (CLTAR) is 0.502. The variable with the highest variability from the mean is CCC with standard deviation of 133 and the one with the least variability is ROA with standard deviation of 0.074.

3.2. Correlation

Table 3 presents the result of correlation coefficients between the study's variables. Average collection period (ACP) and cash conversion cycle (CCC) have negative and significant association with profitability, ROA at 1% level. This suggests that the higher the ACP and CCC, the lower the profit. The association between inventory turnover period (ITP) and profitability is negative but insignificant. Average payment period (APP) and ROA correlate with each other positively, but this association is insignificant.

Table 3

Correlation Matrix

Var	ROA	ACP	ITP	APP	CCC	CATAR	CLTAR	CR	SZ
ROA	1								
ACP	-.287*** (0.000)	1							
ITP	-.073 (0.340)	.105 (0.165)	1						
APP	.093 (0.223)	.093 (0.223)	.048 (0.526)	1					
CCC	-.201*** (0.008)	.420*** (0.000)	.726*** (0.000)	-.324*** (0.000)	1				
CATAR	.100 (0.189)	.201*** (0.008)	.043 (0.572)	-.255*** (0.001)	.258*** (0.001)	1			
CLTAR	-.376 (0.000)	.218*** (0.004)	-.308*** (0.000)	-.199*** (0.008)	.164** (0.030)	.340*** (0.000)	1		
CR	.329*** (0.000)	.017 (0.825)	.381*** (0.000)	-.015 (0.841)	.469*** (0.000)	.391*** (0.000)	-.630*** (0.000)	1	
SZ	.230*** (0.002)	-.217*** (0.004)	.481*** (0.000)	.175** (0.021)	-.496*** (0.000)	-.389*** (0.000)	.045 (0.551)	-.368***	1

*, **, *** represent significant at 10%, 5% and 1% level, respectively.
Source: Authors' computation (2018).

3.3. Collinearity test

A test for the presence of multicollinearity between the explanatory variables was conducted with Variance Inflation Factor (VIF) approach. The major advantage of VIF is that it has the ability to filter from the model the variable (s) that may distort the regression result (Gujarati & Sangeetha, 2008). Table 4 depicts the multicollinearity test result.

Gujarati (2003), Rumsey (2007), Gujarati and Porter (2009) and Wooldridge (2009) argue that VIF of any explanatory variable above 10 shows multicollinearity problem between it and any other explanatory variables.

As shown in Table 4, no variable has VIF of more than 10; it ranges between 1.690 and 6.846 and with average value of 4.165. This clearly indicates no problem of multicollinearity in the variables.

Table 4

Result of Multicollinearity Test

Variable	VIF	1/VIF
ACP	2.091	.478
ITP	4.516	.221
APP	2.269	.441
CCC	6.846	.106
CATAR	3.869	.258
CLTAR	5.512	.181
CR	6.523	.153
SZ	1.690	.592
Average	**4.165**	**.304**

Source: *Researchers' computation (2018).*

3.4. Regression and Discussion

Regression results using pooled ordinary least squares (OLS) technique for each of the four models are disclosed in Table 5. F-statistic values for the four models are significant at 1% level (prob value = 0.000). It depicts that each of the models as a whole is fit. With Durbin-Watson values of 1.159; 1.131; 1.160 and 1.192 for models 1, 2, 3 and 4, respectively are within the acceptable threshold of 1 to 3 (Gujarati, 2003, Asaeed, 2005 and Gujarati and Porter, 2009) shows that the model has no serial autocorrelation issues.

In model 1 (Average collection period, ACP as independent variable and proxy of working capital management practice), the OLS regression result indicates that ACP has an inverse effect on profitability (ROA) and is significant at 1% level. It suggests that the higher the period of collection of amount outstanding, the lower the profit. This outcome is in agreement with the study's *apriori* expectation and is also supported by the works of Abdullah (2014), Pais and Gama (2015), Konak and Guner (2016), Lyngstadas and Berg (2016), Zariyawati, Hirnissa and Diana-Rose (2017) and Yunos, *et al*., (2018). The null hypothesis 1 is hereby rejected. Thus, average collection period is an important factor that affects profitability of firms in Nigeria.

Table 5

Pooled OLS Regression Results

Variable	Model 1	Model 2	Model 3	Model 4
Constant	-3.423*** (0.001)	-2.861*** (0.004)	-3.697*** (0.000)	-2.625*** (0.009)
ACP	-2.733*** (0.007)			
ITP		-2.417** (0.017)		
APP			0.381 (0.703)	
CCC				-3.612*** (0.000)
CATAR	4.802*** (0.000)	4.738*** (0.000)	4.941*** (0.000)	4.396*** (0.000)
CLTAR	-4.565*** (0.000)	-5.170*** (0.000)	-5.105*** (0.000)	-4.511*** (0.000)
CR	-1.017 (0.311)	-1.218 (0.225)	-1.358 (0.176)	-0.101 (0.920)
FSZ	5.582*** (0.000)	4.977*** (0.000)	5.936*** (0.000)	4.375*** (0.000)
R^2	0.385	0.361	0.358	0.404
Adjusted R^2	0.367	0.342	0.340	0.366
F-stat	21.170***	19.073***	18.889***	22.908***
Prob (F-stat)	0.000	0.000	0.000	0.000
Durbin-Watson	1.159	1.131	1.160	1.192
Observations	175	175	175	175

*, **, *** represent significant at 10%, 5% and 1%, respectively.
Source: *Authors' computation (2018).*

For model 2 (inventory turnover period, ITP as a proxy of working capital management practice), the regression result shows that ITP has a negative and significant relationship with profitability (ROA) at 5% level. It suggests high inventories level impact negatively on profitability because of the capital that is unduly tied up. The finding is in accordance with the *apriori* expectation. Some prior empirical studies (see Shubita, 2013, Almazari, 2014, Rezaei and Pourali, 2015, Zariyawati, *et al*. 2017) and Yunos, *et al*. 2018) supported this outcome. The null hypothesis 2 is rejected. Thus, inventory turnover is an important component of working capital management which affects profitability in Nigeria.

Regarding model 3 (average payment period, APP as a proxy of working capital management practice), regression output reveals that APP has a direct and insignificant influence on profitability (ROA). Although, the positive signal of the beta coefficient of the variable is in line with the *apriori* expectation, but it is not significant. The finding is in agreement with studies conducted by Owolabi and Alu (2012), Akoto, *et al*., (2013), Shubita, (2013), Osundina (2014) and Hassan, Imran, Amjad and Hussain (2014), while it was against the outcome of the studies of Agha (2014), Abdullah (2014) and Rezaei and Pourali (2015), that produced positive and significant relationship. The null hypothesis 3 is hereby failed to be rejected. Thus, average payable period is not an important component of working capital management that influences profitability of Nigerian firms.

Lastly, in model 4 (cash conversion cycle, CCC as a proxy of working capital management practice), the regression result provides evidence of an indirect and significant association between CCC and ROA at 1% level. This suggests that profitability can only be enhanced if efforts are made at reducing the time lag between the period purchases were made and cash received from goods sold. The outcome is in accordance with *apriori* expectation and follows the prediction of working capital aggressive policy. Empirical evidences in support of this outcome are from the works of Zakaria and Amin (2013), Panigrahi (2014), Rezaei and Pourali, (2015), Konak and Guner (2016), Bhatia and Srivastava (2016) and Zariyawati, *et al*. (2017). The null hypothesis 4 is hereby rejected. Thus, cash conversion cycle is an important predictor that drives profitability of Nigerian firms.

The signals of three control variables (CATAR, CLTAR and SZ) for each of the models are as predicted. CATAR and FSZ are positively related to ROA at 1% level, while CLTAR is indirectly related to ROA at 1% level. However, CR produces a negative but insignificant association with ROA.

3.5. Robustness check

In order to validate the result of pooled OLS technique which confirmed that CCC has inverse influence on profitability (see Table 5), two other analytical techniques mostly used in the literature, Fixed effects least squares (FELS) and Random effects generalised least squares (REGLS) regressions were conducted. The result is depicted in Table 6.

The summary of Hausman (1978) specification test indicates Chi square value of 1.822 and prob value of 0.873 ($p > 0.05$), thereby supporting REGLS technique for valid inference. Although, the results of both models (FELS and REGLS are similar), inference is made using REGLS. Adjusted R^2 is 57.7%. F-stat value is 9.177**,** which is

significant at 1% level ($p < 0.01$) and Durbin-Watson value of 1.293 (which is within acceptable threshold). All these indicate that the model as a whole is fit and has little or no presence of serial autocorrelation that can affect significantly the inference to be made from the regression output.

Table 6

Fixed effect and Random effects Regression Results

Variable	Fixed effects	Random effects
Constant	-0029 (0.977)	0.331 (0.742)
CCC	-1.786* (0.076)	-1.771* (0.079)
CATAR	3.310*** (0.001)	3.056*** (0.008)
CLTAR	-2.881*** (0.005)	-2.701*** (0.008)
CR	-0.219 (0.827)	-0.102 (0.919)
FSZ	0.245 (0.807)	-0.152 (0.879)
R^2	0.644	0.647
Adjusted R^2	0.573	0.577
F-stat	9.058***	9.177***
Prob (F-stat)	0.000	0.000
Durbin-Watson	1.306	1.293
Hausman Chi square	1.822	
Prob (Hausman)	0.873	
Observations	175	175

*, **, *** represent significant at 10%, 5% and 1% respectively.
Source: *Authors' computation (2018).*

As reported in Table 6, CCC (the most prominent measure of working capital management) has a negative and significant effect on profitability (ROA) at 10% level. This outcome empirically validates the result as produced by the main analytical tool (pooled OLS) used in the study.

4. Conclusion and Recommendations

The effect of working capital management practices on profitability of 25 Nigerian listed non-financial companies in five sectors was investigated. Empirical findings revealed a negative and significant effect of average collection period, inventory turnover and cash conversion cycle on profitability, ROA.

In line with empirical findings, it is recommended that corporate managers should take necessary steps in planning, controlling and managing every component part of working capital management practices (accounts payable, inventory turnover, accounts payable and cash conversion cycle). It is only when the components parts are allowed to operate at optimum level that enhancement of a company's profitability and maximization of shareholders wealth will be achieved.

In order to achieve a more robust study than what is presented in this study, future researches can be conducted in other sectors, such as financial services and small- and- medium-sized companies. The possibility of increasing the sample size and time frame should also be taken into cognizance.

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