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WORKING CAPITAL MANAGEMENT AND PROFITABILITY OF LISTED HEALTHCARE FIRMS IN NIGERIA

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Abstract

This work examined the consequence of operational capital management on corporate performance in Nigerian listed manufacturing firms. Selected companies' data were extracted for a period of seven years (2013-2019). Correlation research and multiple regressions were adopted as research design and technique of data analysis respectively. Result from the study indicated that inventory conversion cycle and average payment period effect on profitability; cash conversion cycle is connected amid profitability, and average collection period shows a negative insignificant association with profitability. Management is expected to generate worth for their shareholders by controlling the account receivable days and rising the accounts payment time and inventories to a realistic time ceiling. Resting on this basis, the work recommended that healthcare firms should advance their organization of stock so as to strap up fewer cash inventories.

Keywords: Working Capital, Profitability, Healthcare Firms, Inventory Conversion Circle

1. Introduction

Healthcare industry is among the important industries for countries growth and a significant pointer of domestic economic expansion. Working capital is seen as the blood flow in life for firms. Working capital provides the present state of the enterprise as well as the ability to maintain operating. According to Almazari (2013) operational capital management, is the organization of current resources and current liabilities, straight affects profitability and the estimation of companies in the market. Working capital is essentially company's current assets that are part of the economic wealth of businesses that transform from one form to another throughout day-to-day operation of the firm (Şamiloğlu& Akgün 2016). Current assets consist primarily of currency, prepayments, temporary investments and accounts receivable.

The operational resources management of a company has been known to be a important area of financial administration. The key objective of WCM is to preserve best possible equilibrium amid working capital element (Gitmen, 2009). The conventional operational capital perception is the variation amid current liabilities and current assets. This however does not offer a precise understanding of the liquidity of the company. Firms, either for profit making or else and regardless of magnitude and kind of business needs essential sum of working capital. Largely, liquidity maintenance, profitability and solvency of business featured working capital (Mukhopadhyay, 2004). Specific working capital components comprising of cash, account receivables, inventory organization and marketable securities play an important part in the performance of company.

The working capital organization, company is confronted dual essential questions. Firstly, given the sales volume and expenditure considerations significance, what are the ideal volumes of account receivable, inventories and cash assets that an organization should select to preserve? Secondly, known these ideal volumes, what is the best reasonable means to funding these investments in working capital? To arrive at the finest probable yields, businesses should retain no non-productive assets and must be financed with the inexpensive accessible sources of resources. Profitability is a merged valuation of how healthy a firm accomplishes its vital parameters, especially financial, shareholders and market performance. It is a subsection of firm's analytical intelligence which is interested in the wellbeing of the firm, and is conventionally calculated as financial performance. Though, lately the notion of profitability took over.

Profitability as well as Liquidity is two significant and also main characteristics of corporate survival of business (Vataliya, 2009). The issue is that growing income at the expense of liquidity could lead to severe trouble to the company. Thus, there should be a balance amid the profitability and liquidity of companies. Any of the two must not be at

the expense of the other since the two have their distinct significance. If company overlook profit, they may not endure for a longer period. Similarly, if company cares less about liquidity, it could face the issue of bankruptcy or insolvency. As a result of these, management of companies most show highest attention for working capital organization as it shall eventually concern the firm's profitability. As such, firms can attain utmost profitability and can sustain acceptable liquidity with the aid of effective and efficient working capital organization.

Additionally, working capital management effectiveness is very vitaldue to the fact that it influences the liquidity and profitability of firms (Taleb, et al., 2010). The key intent of working capital organization is to attain ideal equilibrium amid the components of operational capital organization (Gill, 2011). Studies such as; Nyabwanga et al., (2012) among other, indicated that a number of successful firms had no issue with working capital management variables. It has nevertheless been revealed that some approaches managers utilize in practice on decision on working capital principally violated finance, but unclear convention of thumb or defectively constructed models are applied (Emery et al., 2004). This, therefore, constrain managers to efficiently achieve the several blend of components of working capital at their disposal. Therefore, firm may either be undercapitalized or overcapitalized or worst close a business.

The study of Egbide (2009) found huge number of failed businesses previously has to do with the incapability of financial director to strategize and organize working capital of their individual companies. This stated incompetency's connected with financial managers are still perpetuated in disguise of high inventory cost, high bad debts etc, that in turn shoddily affect their profitability. Therefore, absence of suitable researches and application of working capital amid development of companies has created the predicament of inadequate enlightenment in of working capital to grow companies' profitability. Therefore, it becomes necessary to study the consequence of operational capital to improve the profitability of firms in Nigeria.

Centrally the goal of this research is to examine the impact of operational capital management on the corporate profitability of listed healthcare firms in Nigeria. Hypothetically, this study is sets to test the following null hypotheses:

H01: Average collection period has no significant effect on profitability of listed healthcare firms in Nigeria

H02: Inventory conversion period has no significant effect on profitability of listed healthcare firms in Nigeria

H03: Average payment period has no significant effect on profitability of listed healthcare firms in Nigeria

H04: cash conversion cycle has no significant effect on profitability of listed healthcare firms in Nigeria

This research paper will be of benefit the management that are concerned with management of working capital and administration. The research also serves as a position literature to prospective researchers in the area.

The remain of the research is separated into 4 segments jacketing literature discussion and theoretical framework, the methodology the research adopted and specification of the model, presentation of product and its debate and finally, conclusion and suggestion.

2. Literature review

This segment discusses the relevant and related literature of the research. Items discussed include review of practical researches on operational capital management and profitability and lastly the theoretical framework was discussed.

Charitou et al., (2010) investigated the outcome of operational capital management on firms' success in rising market. Information consists of companies in Cyprus stock exchange for the period 10 years. Adopting multivariate regression testing, the outcome summit out that, cash conversion cycle is linked amid firm's profitability.

Abdulazeez et al., (2018) study titled operational capital management and financial performance of listed conglomerate firms in Nigeria employed Ordinary Least Square (OLS) Regression to evaluate the data. The result showed that creditors period of collection, debtors' period of payment and magnitude of firm were allied negatively with performance whereas cash conversion cycle has an immaterial affiliation with economic performance of the studied firms. One of the recommendations of the study is that listed conglomerate companies ought to keep existing debtors' assortment phase or minimise it for possible maintaining of profit status.

Uremadu et al., (2012) explored influence of liquidity and operational capital management on business profitability in Nigeria companies using 25 manufacturing firms within two years and it was revealed that there is an alliance involving liquidity and business success in the companies studied with the association being either negative or positive.

Owolabi and Alayemi (2010) in a research titled working capital as a financial strategy revealed that there is a significant depressing association involving the working capital (particularly in relations of whether the firm used a conservative or aggressive method in managing their working capital) and the profitability of a Nigerian manufacturing firms.

Almazari (2013) research was on eight Saudi cement companies and the outcome of the research indicated that liquidity and profitability are positively and considerably connected within the period of the study.

Gill et al., (2010) investigated a link between operational capital management and success in United States. With a model of 88 corporations in America that are on New York stock exchange for a time frame of 3 years. Outcome of the study establish statistically considerable union amid the cash conversion cycle and profit of a firm.

Dang and Soo (2010), assessed the association linking operational capital management and firm's success between 2006 and 2008. Outcomes showed a connection but negative with profitability. Where the cash conversion cycle increases, profitability decreases. Consequently, management can efficiently straight cash conversion cycle and raise shareholder's worth.

Raheman et al., (2010) studied the effect of operational capital management on companies' progression for the period of 10 years (1998 to 2007). The outcome of the research shows that net trade and cash conversion cycle have a momentous consequence on the performance of corporations. The research likewise completed that in Pakistan, most of the firm's policies on working capital are conservative and are required to focus and advance their collection and payment rule. Similarly, FalopeandAjilore (2009), utilising data from a sample of 50 manufacturing corporations found an unhelpful connection between cash conversion cycle and net operational profit.

Oghloo and Jence (2008) perform a study on the power of working capital organization on business profitability in Turkey for time coverage of ten years. Regression technique and some variables of accounting were utilised for assessing working capital management. The outcome displayed that inventory turnover; leverage and receivable collection period have unconstructive influence on corporate profitability. However, business size has a constructive influence on corporate profitability.

Study of Sing and Penny (2008) was carried on the impact of working capital organization on business profitability between 1990 and 2008. The study found that receivables turnover, acid test ration and current ratio have substantial effect on working capital.

Padachi (2006) investigated the trends in working capital administration effects on the performance of 58 Mauritian small industrialized companies for six years (1998-2003). The study disclosed that a sound planned working capital administration is likely to

contribute to the firms' value creation. The outcome also showed that heavy investments in receivables and inventories is related to low profit and revealed an increased tendency in the short-term constituent of working capital financing.

Raheman and Nasr (2007) investigated the association amid working capital administration and profitability of firms on companies on Karachi Stock Exchange by means of standing measure of liquidity and on-going functional measure of working capital administration between 1999 and 2004. Results proposed there exists a unhelpful association involving working capital management process and profitability.

Sen (2009) examined the ISE (Istanbul Stock Exchange) listed companies and find out the association among the working capital. According to the study there subsist an association that is negative among variables. The study revealed the finance director significance who serves as mediator or catalysts to boost the profitability of the firm certainly influence the performance of firm.

Several theories have been applied to explain and emphasise the analysis of working capital administration and business performance. These theories as discussed in the works of Adamu (2016) are: the theory of protective working capital administration which states that firms endeavour to lessen danger by bringing down current liabilities or keeping surplus working capital so as to cater for emergencies that may come up unexpected. Also, the aggressive theory of working capital management needs complete investment of current assets and portion of the financing of fixed assets funded through temporary sources and lastly, conventional working capital management theory, that is a stand amid defensive and forceful theories of working capital management. It suggests that firms do not require being more aggressive by lessening the intensity of current assets in comparison to current liabilities or defensive by rising the intensity of current assets compared to the liabilities traded.

The preference for the practice of working capital management is dependent upon the purpose (s) to be accomplished by the firms. Nevertheless, every exercise has its own benefit and cost and also ecological effects. For the purposes of this study, the underpinning theory adopted is the conservative working capital management theory. This is because the Nigerian environment is so unstable that the impending cash flow, weight and universal prices cannot be verified and forecasted neutrally, and the cash surplus cannot be linked to unexpected contingencies because of the high cost associated with them.

3. Methods and Variables

To scrutinize the affiliation between working capital administration and corporate performance, the study employed correlation research design. The option of this design is knowledgeable by the positivism structure, which assumes that collective certainty is singular, purpose and independent. It also involves the utilization of deductive practice with theories for the thoughtful and justification of social fact. Equally, correlation research design is preferred because they aspire is to investigate the contact as well as the interaction amid different variables in the study. The research used secondary data extracted from the available audited accounts of all listed healthcare firms for 7 years (2013-2019). The population of the study is the entire 10 healthcare firms listed on the Nigerian Stock Exchange as at 31st December, 2019. Censor sampling technique was adopted and all10 firms were chosen as sample. This study is empirical and descriptive because it adopted multiple regression analysis. Multiple regressions technique was adopted for the purpose of the analysis and the regression was run using STATA software.

The model of the study is represented by the following equation using a balanced panel data of ordinary least square as follows:

 $ROAit = \beta oit + \beta 1 ACPit + \beta 2 ICPit + \beta 3 APPit + \beta 4 CCCit + \beta 5 SIZEit + \mu it$

Whereas:

ROA= return on asset

ACP= average collection period

ICP= inventory conversion period

APP= average payment period

CCC= cash conversion cycle

SIZE= size of the firm.

 $\beta 1 - \beta 5 =$ Coefficient of explanatory variables

 β o = Constant or Intercept

 $\mu = Error Term$

Table 1: Variable Measurement

Variable	Measurement	Source		
		Dang & Soo		
Return on Asset	Profit before tax/Total Asset	(2010)		
Average Collection	No. Of Acctg Period/Average amount of	Afza & Nasir		
Period	(2007)			
Inventory		Aborede		
Conversion Period	365(ssp/365)	(2004)		
Average Payment	Account Payable + Note Payable/Average Daily Aborede			
Period	(2004)			

Cash Conversion		Aborede
Cycle	DIO + DSO - DPO	(2004)
Size of Firm	Nat. Log of Total Assets	Sen (2009)

SOURCE: Authors

4. Results, Analysis and Discussions

The section delves into the presentation of data, analysis and interpretation of outcome relating to the connection amid working capital administration and business performance of listed healthcare firms in Nigeria. Initially, descriptive statistics table is offered and analysed, accompanied by the correlation matrix table and after all the summary of regression product table.

4.1 Descriptive Statistics

The descriptive figures are intended to display the values and the nature of the study data. The statistics also aids researches to appreciate the measurability of the variables.

Table 2: Descriptive Statistics

Variables	Min	Max	Mean	Std. Dev.	Skewness
ROA	0.168	0.194	0.182	0.108	-0.327
ACP	53.980	69.640	62.010	5.430	-0.011
ICP	133.430	207.020	191.870	28.720	-1.760
APP	18.520	150.310	120.710	50.990	-1.650
CCC	56.300	145.220	104.890	32.490	-0.412
Size	15.310	16.580	15.990	0.453	-0.310

SOURCE: Extract from STATA

Table 2 presents the synopsis of the descriptive figures of proxies used in the study for the selected firms between the periods considered. The value of the mean for return on asset (ROA) is 18.15% and the standard variation of 1.1%. The average collection period mean is 62 days (2 months) and its standard deviation of 5 days. On usual, the firms get 192 days (approximately 6 months, 2 weeks) to transform their stocks into sales with a standard variation of 29 days. Table 4.1 also illustrate that the firms on the normal take 121 days (4 months) to settle its creditors with a standard variation of 51 days. The mean cash conversion cycle is 105 days (3 months, 2 weeks) with standard deviation of 32 days. The table added showed that the firms on the normal have a current ratio of 2.751 and debt ratio of 25.7%. The table further showed that an average firm has a magnitude of 15.99 as calculated by the natural logarithms of its assets.

4.2 Correlation Matrix

Correlation matrix function is to find out the relationship among the studies two different variables vis-à-vis the independent variables themselves. Therefore, table 4.2presents the study's correlation matrix for the model observations.

Table 3: Correlation Matrix

Variable	ROA	ACP	ICP	APP	CCC
ROA	1.000				
ACP	-0.282	1.000			
ICP	-0.314	0.166	1.000		
APP	-0.318	0.013	0.318	1.000	
CCC	-0.755	0.160	0.381	0.195	1.000

SOURCE: Extract from STATA

Table 3 shows that there exists a correlation that is negative among the dependent variable and all the independent variables. Average collection time is notably and negatively linked to performance at 28%, Inventory conversion period correlate perfectly with performance to the tune of about 31%, and average payment period relates significantly with performance to about 32%. The correlation among the study's explanatory variables required to be not too strong, thus most the study's explanatory variables are not too strongly associated apart from a few of them that are significantly associated conflicting the study's expectation.

The presentation of regression result is presented in table 4 below:

Table 4: Summary of Regression Result						
Variable	Coefficient	t-values	P-values	Tolerance	VIF	
Constant	0.203	1.603	0.116			
ACP	-0.020	-0.069	0.956	0.416	2.402	
ICP	0.038	0.580	0.005	0.739	1.354	
APP	7.352	1.804	0.022	0.411	2.431	
CCC	0.000	-3.549	0.005	0.591	1.691	

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R					0.510
R2					0.260
F-Stat.					3.783
F-Sig					0.010
SOURCE: Extract from STATA					

The collective link amid the explanatory and explained variables is 0.510 reveals that the link amid Performance and working capital management variables utilized in the study is 51% which is significant. This means any variations in working capital management of Nigerian healthcare firms; their Performance will be linked directly.

The collective R2 (0.260) shows the percentage variant in the dependent variable explained by the independent variables together. Therefore, it indicates 26% of the total change in Performance of Nigerian healthcare firms is caused by the contribution of all the independent variables. This shows that the study's model is robust.

The regression result in table 4 indicated that the coefficient of ACP with negative with .000 and has no significant impact on ROA (p>.05). Thus, the null hypothesis (H1) that average collection period has no significant collision on corporate performance of the firms is failed to be rejected. This implies that short ACP is excellent for explaining the corporate performance of the firms, but it is not a good factor to think about when taking assessment about corporate performance in the long run.

Similarly, the regression results show a positive relationship between ICP and ROA, which is significant (p<.05). Thus, the hypothesis two (H2) of the study which says ICP has no important contact on business performance of firms is rejected. This suggests that accumulating high stock decreases the cost of likely disruptions in the manufacturing process and loss of trade as a result of product scarcity. Maintaining inventories that are high also aids in declining the fee of supplying the products and guards' firms against fluctuations of prices.

The coefficient of ACP as shown in table 4 shows a significant positive link amid APP and ROA (p<.05). This gives us the evidence of rejecting hypothesis three of the study which says average payment period has no major impact on corporate performance. This suggested that an increase in the number of day's account by one day is linked with an increase in performance.

The regression coefficient in respect of CCC stood at -.00, which is significant. Thus, the hypothesis four of the study that cash conversion cycle (CCC) has no considerable impact on corporate performance of healthcare firms is rejected. This implies that the negativity between cash conversion cycle and corporate performance might be explained by market control or market share. A shorter cash conversion cycle is efficacious because of bargaining power by the suppliers and/or the customers as well as higher performance due to market domination.

5. Conclusion and Recommendation

Most of the Nigerian healthcare firms have hefty amount of cash invested in working capital. It can consequently be likely that the way working capital is managed will have impact on their corporate performance. The study concludes that managers can generate worth for their shareholders by dropping the number of day's account receivable and rising the accounts payment period and inventories to a logical maximum.

Based on the findings of the study, the following recommendations are suggested to healthcare firms on how to improve their level of working capital administration, and their corporate performance.

A longer credit period should be initiated for health firms to achieve better corporate performance via profitability.

Health firms should improve their management of stock so as to strap up fewer cash inventories.

Healthcare firms should explore extended term funds to substitute short term borrowings and assemble up cash reserves.

Healthcare firms should employ a dividend policy that holds profits in the company

Healthcare firms should secure long term funds both for potential capital asset investment and the better recurrent working capital investment.

There should be availability of full 30-days settlement terms of offer from creditors.

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