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REVEIW ARTICLE

EFFECT OF WORKING CAPITAL MANAGEMENT ON CORPORATE PROFITABILITY OF MANUFACTURING FIRMS IN NIGERIA: DANGOTE CEMENT PLC

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ABSTRACT

This research work focused on the effect of working capital management on the corporate profitability of manufacturing firms using Dangote Cement Plc. as a case study. Two hypotheses were formulated and tested using annual reports sourced from Dangote Cement Plc. web database spanning from 2007 to 2016. Ordinary least squares regression method was employed using a multiple regression model and results showed that efficient working capital management has positive significant influence on return on assets and that efficient working capital management has positive significant influence on net profit margin. It was however recommended that firms should improve their working capital policies in order to enhance corporate profitability and that there should be periodical appraisal of investments in working capital using capital investment models, determining ahead the viability of such investments.

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INTRODUCTION

Working capital refers to the organization's investment in short term assets and it is important to the financial health of businesses of all sizes (Padachi, 2006). This importance is hinged on many reasons, first, the amounts invested in working capital are often so high in proportion to the total assets employed and it is vital that these amounts are used in an efficient way. Secondly, the management of working capital directly affects the liquidity and profitability of the corporate organization and consequently its net worth. Working capital management therefore, aims at maintaining a balance between liquidity and profitability while conducting the day-to-day operations of a business concern (Smith, 1980). Working capital is of utmost importance in any organization. Management of working capital is one of the most important functions of corporate management. Every organization whether profit oriented or not, irrespective of its size and nature of business, needs requisite amount of working capital to be maintained at any point in time. The capital to keep an entity moving on day-to-day operation of the business is working capital. The efficient working capital management is the most crucial factor ensuring survival, liquidity, solvency and profitability of the concerned business organization (Jose, Lancaster and Stevens, 1996). An organization needs sufficient cash to carry out purchase of raw materials, payment of day-to-day operational expenses including salaries, wages, repairs and maintenance expenses and others. Funds to meet these expenses are collectively known as working capital. In simplicity, working capital refers to that portion of total fund, which finances the day-today working expenses during the operating cycle of a business. Working capital is necessary in the day to day running of the business and this includes inventories, debtors, short term marketable securities, cash at bank, cash on hand, short term loans and advances, payment of advance tax and all current assets and current liabilities. A business organization should determine the exact requirement of working capital and maintain the same evenly throughout the operating cycle. It is worth mentioning that a firm should have neither excess nor inadequate working capital as both phenomena of over capitalization and under capitalization of working capital generates adverse effects on the profitability and liquidity of the concerned companies. The effective working capital necessitates careful handling of current assets as to ensure liquidity and solvency of the business (Harris, 2005). The ultimate objective of any firm is to maximize the profit (Deloof, 2003). However, preserving liquidity of the company to a minimal level is also an important objective for organizational survival (Smith, 1980). Thus, the problem is that increasing profits at the cost of liquidity can bring serious problems to the company. Therefore, there must be a trade-off between these two objectives of the company (Eljelly, 2004). The debtors' collection period should be reduced while the creditors payment period should be increased. One objective

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should not be at the cost of the other because both have their importance for corporate survival. If organizations do not care about profit, they cannot survive for a longer period. On the other hand, if they do not care about liquidity, they may face the problem of insolvency or bankruptcy which may finally lead to liquidation. Thus, to achieve the above corporate objectives, there is need for proper consideration of working capital management and ultimately its effect on corporate profitability (Egbide, Enyi and Uremadu, 2012). Hence, this study examines working capital management and corporate profitability, analysis of Nigerian firms.

Statement of Problem

One of the serious problems faced by a good number of companies is poor working capital management (Smith, 1980). A large number of business failures in the past had been blamed on the inability of financial managers to plan and control the working capital of their respective organizations (Egbide *et al*, 2012). These reported inadequacies among financial managers are still manifesting today in many organizations in the form of high bad debts, high inventory cost, etc. which adversely affect their operating performance. Also, increasing of profits at the cost of liquidity might cause serious trouble to the firm and this might lead to financial insolvency. Moreover, insufficient liquidity might damage the firm's goodwill, deteriorate firm's credit standings and might lead to forced liquidation of company's assets (Charterjee, 2012). In view of the above problem, this study will consider working capital management and corporate profitability, case study of Dangote Cement Plc., Nigeria.

Research Objectives

- To ascertain the extent efficient working capital management influences net profit margin.
- To determine the magnitude to which efficient working capital management affects return on assets

Hypotheses

H_0: Efficient working capital management does not have positive significant influence on net profit margin.
H_0: Efficient working capital management does not have positive significant influence on return on assets.

Theoretical Review

Smith and Begemann, (1997) emphasized that those who promoted working capital theory shared that profitability and liquidity comprised the salient goals of working capital management. The problem arose because the maximization of the firm's returns could seriously threaten its liquidity, and the pursuit of liquidity had a tendency to dilute returns. Thus, the relationship between profitability and working capital helps understand the relationship between profitability and liquidity, the dual goals of the working capital management literature. These concepts constitute what is here labelled as the theoretical frame work. The operating cycle theory looks explicitly at one side of working capital that of current asset account and therefore gives income statement measures of firm's operating activities, that is, about production, distribution and collection. Receivables, for instance, are directly affected by the credit collection policy of the firm and the frequency of converting these receivables into cash matters in the working capital management. By granting the customers more liberal credit policy, the profitability will be increased but at the same time liquidity will be sacrificed. The same analysis goes for other components of current asset accounts. However, the operating cycle theory tends to be deceptive in that it suggests that current liabilities are not important in the course of firm's operation. Our understanding of payables as the sources of financing the firm's activities can be assailed as a result. Given the inadequacy of the operating cycle theory, it is essential to infuse current liabilities in the picture to enhance our analysis and understanding. It is the cash conversion cycle theory that has achieved this for us. The theory integrates both sides of working capital. In their seminal paper, Richards and Laughin (1980) devised this method of working capital as part of a broader framework of analysis known as the working capital cycle. It claims that the method is superior to other forms of working capital analysis that rely on ratio analysis or a decomposition of working capital as claimed above. The cash conversion cycle is calculated by subtracting the payables deferral period (360/annual payables turnover) from the sum of the inventory conversion period (360/annual inventory, turnover) and the receivables conversion period (360/annual receivables turnover). More recently, the number of days per year that appears in the denominator as 360 has been replaced by 365 to improve accuracy. Since, each of these three components is denominated by some number of days, the conversion cycle is also expressed as a number of days. It has been interpreted as a time interval between the cash outlays that arise during the production of output and the cash inflows that result from the sale of the output and the collection of the accounts receivable.

Efficient working capital management is necessary for achieving both liquidity and profitability of a company. A poor and inefficient working capital management leads to tie up of funds in idle assets and reduces the liquidity and profitability of a company (Reddy and Kameswari, 2004). Efficient liquidity management involves planning and controlling current assets and current liabilities in such a manner that eliminates the risk of inability to meet due short term obligations and avoids excessive investment in these assets. The cash conversion cycle has been one of the more important measures of liquidity than the current ratio that affects profitability. There is a negative relationship between profitability and liquidity indicators such as current ratio and cash gap (Eljelly, 2004). Eljelly (2004) elucidated that efficient liquidity management involves planning and controlling current assets and current liabilities in such a manner that eliminates the risk of inability to meet due short–term obligations and avoids excessive investment in these assets. The relation between profitability and liquidity was examined, as measured by current ratio and cash gap (cash conversion cycle) on a sample of joint stock companies in Saudi Arabia using correlation and regression analysis. The study found that the cash conversion cycle was of more importance as a measure of liquidity than the current ratio that affects profitability at the industry level. The results were stable and had important implications for liquidity management in various Saudi companies. First, it was clear that there was a negative relationship between profitability and liquidity indicators such as current ratio and cash gap in Saudi sample examined. Second, the study also revealed that there was great variation among industries with respect to the significant measure of liquidity. Egbide *et al*. (2012) emphasized that the major concepts of the working capital management are profitability and liquidity. They point out that there exists a

trade-off between profitability and liquidity. Thus, the relationship between profitability and working capital helps understand the relationship between profitability and liquidity, the dual goals of the working capital management. Although, there seems to be that the scholars who have written on this relationship have not completely synthesized their various hunches into a theory, there is noticeable consistency in the use of few guiding concepts in working capital management literature. These concepts constitute what is here labelled the theoretical framework after all, a theory is a supposedly tenable explanation about a relationship. Working capital meant to provide liquidity, which is essential for a company to operate on a day-to-day basis. Moreover, there can be other reasons why the company prefers to hold liquidity. Michalski (2007) points out that another reason to hold liquidity is management anxieties: managers fear the negative part of the risk and hold liquidity to hedge against it; however, liquidity balances are held to use chances that are created by the positive part of the risk equation as well. There are different ways to assess how effectively the management deals with working capital. The traditional way to do that is to calculate the liquidity ratio called current ratio (current assets/current liabilities). The drawback of the ratio is that it is very general, not giving detailed enough information. Therefore, other liquidity ratios such as quick ratio (cash and cash equivalents and accounts receivable/current liabilities) or cash ratio (cash and cash equivalents/current liabilities) are used together with the current ratio to see where the issues that need to be addressed exactly lie.

Empirical Review

Naeem, Malik, Muhammad, & Mehboob (2014)explored the effect of working capital management on firm performance taking a sample of non-financial listed firms in Pakistan. They adopted panel econometric technique using Ordinary Least Squares (OLS) to estimate the relationship between working capital and firm performance. Three performance measures namely gross profit margin, return on asset, and return on equity are used to estimate the impact of working capital variables such as average age of inventory, average collection period, and average payment period. Empirical results indicate that average age of inventory is positively related to gross profit margin and return on asset, whereas it is negatively related to return on equity but the relationship is found insignificant the relationship is found insignificant. Although the relationship is insignificant but positive sign may be because of increasing sales which leads to higher profit and thus fewer inventories. Average collection period is significantly and positively related to gross profit margin and return on assets. This finding shows that management of receivables has a positive impact on firm performance. Moreover, it confirms the prediction that reduction in average collection period improves the accounts receivable turnover which in turn positively affects the firm's profitability. Although average collection period is positively related to return on equity but the relationship is found insignificant. Average payment period is positively related to gross profit margin and negatively related to return on asset but the relationship is found insignificant. However, average payment period is positively and significantly related to return on equity. Mwangi, Makau, & Kosimbei (2014) investigated the effect of working capital management on the performance of non-financial companies listed in the Nairobi Securities Exchange (NSE), Kenya. The study employed an explanatory non-experimental research design where a census of 42 non-financial companies listed in the Nairobi Securities Exchange, Kenya was taken. The study used secondary panel data contained in the annual reports and financial statements of listed non-financial companies. The data were extracted from the Nairobi Securities Exchange hand books for the period 2006-2012.The study applied panel data models (random effects) using Feasible Generalized Least Square (FGLS) regression, their results however revealed that an aggressive financing policy had a significant positive effect on return on assets and return on equity while a conservative investing policy was found to affect performance positively. The study recommended that managers of listed non-financial companies should adopt an aggressive financing policy and a conservative investing policy should be employed to enhance the performance of non-financial companies listed in the NSE, Kenya. Makori & Ambrose (2013) analyzed the effect of working capital management on firm's profitability in Kenya for the period 2003 to 2012. Balanced panel data of five manufacturing and construction firms each which are listed on the Nairobi Securities Exchange (NSE) is used. Pearson's correlation and Ordinary Least Squares regression models were used to establish the relationship between working capital management and firm's profitability.

The study finds a negative relationship between profitability and number of day's accounts receivable and cash conversion cycle, but a positive relationship between profitability and number of days of inventory and number of day's payable. Moreover, the financial leverage, sales growth, current ratio and firm size also have significant effects on the firm's profitability. They colcluded that the management of a firm can create value for their shareholders by reducing the number of day's accounts receivable and that management can also create value for their shareholders by increasing their inventories to a reasonable level. (Agha, 2014) examined the impact ofworking capital management on profitability.To investigate this relationshipbetween these two, the author collected secondary data from Glaxo SmithKline pharmaceutical company registered in Karachi stock exchange for theperiod of 1996-2011. For this purpose, in this study we use variable of returnon assets ratio to measure the profitability of company and variables ofaccount receivable turnover, creditors turnover, inventory turnover andcurrent ratio as working capital management criteria. The results of theresearch show that there is a significant impact of the working capitalmanagement on profitability of company. Therefore, managers may enhancethe profitability of their firms by minimizing the inventory turnover, accountreceivables ratio and by decreasing creditors turnover ratios but there is nosignificant effect of increasing or decreasing the current ratio onprofitability. So, the results indicate that through proper working capitalmanagement the company can increase its profitability. This study willbenefit the Pharmaceutical companies in the management of their workingcapital in such an efficient manner so that they can multiply theirprofitability. In Nigeria, Abdulrasheed, Khadijat,Sulu and Olanrewaju (2011) assessed inventory management in selected small businesses in Kwara State, Nigeria. Using a regression model to explain the effect of inventory value on performance proxy by profit over a period of ten years, the study revealed that aNaira change in stock would cause almost a Naira (92 Kobo) change in profitability of selectedbusinesses. This result indicated a strong positive relationship between inventory and profitabilityof small

businesses in Kwara State of Nigeria. They thus concluded that small businesses are likelyto generate higher profit if an effective inventory management is put in place.

Knowledge Gap

There has been little or no work done on *working capital management and corporate profitability* in Nigeria. Also other works done by other international authors just concentrates on working capital management or its individual variables, here, we concentrated on efficiency of working capital management and its effect on corporate profitability using Sales growth and debt ratio to represent efficiency.

MATERIALS AND METHODS

The research design employed by the researcher is ex post-facto research which aids measure the relationship between one variable and another using historical data. The nature of data for the analysis of this study is secondary accessed from the Dangote Cement Plc. Annual Report from 2007 to 2016. A regression model has been employed, the essence of regression is to use a mathematical equation to express the nature of the relationship existing between variables and ultimately to use this equation to predict the value one variable given a specific value of the other variable (Ugbam, 2001).

The following is a multiple regression model adopted

$Y = b_0 + b_1X_1 + b_2X_2 + \dots \mu.$

Where:Y = the variable we are trying to predict; b_0 = the intercept; b_1 = the slope; X = the variable we are using to predict Y; μ = the error term.

The intercept (b_0) is the value of the dependent variable when the independent variable is equal to zero while the slope of the regression line (b_1) represents the rate of change in Y as X changes. Because Y is dependent on X, the slope describes the predicted values of Y given X.

The above model can thus be applied in this study as:

$ROA = b_0 + b_1CCC + b_2SG + b_3DR + \mu$ ……... Eqn. (1)

$ROS = + b_1CCC + b_2SG + b_3DR + \mu$ …..……..….. Eqn. (2)

Where

ROA – Return on Assets ()
CCC – Cash Conversion Cycle (Proxy for Working Capital Cycle)
ROS – Return on Sales (Profit for Net Profit Margin)
SG – Sales Growth (Proxy for Firm performance)
DR – Debt Ratio (Proxy for Efficiency)

$$ROA = \frac{Net\ Income}{Total\ Assets}$$

$$ROS = \frac{Net\ Income}{Sales}$$

$$SG = \frac{S2-S1}{S2} x \frac{100}{1}$$

$$DR = \frac{Total\ Liability}{Total\ Asset}$$

CCC = Stockholding Period + Debtors Collection Period – Creditors Payment Period

$$SHP\ (Stock\ Holding\ Period) = \frac{Stock}{\text{Cost of Sales}} x \frac{365}{1}$$

$$DCP\ (Debtors\ Collection\ Period) = \frac{Debtors}{\text{Cost of Sales}} x \frac{365}{1}$$

$$CPP\ (Creditors\ Payment\ Period) = \frac{Creditors}{\text{Cost of Sales}} x \frac{365}{1}$$

Techniques of Data Analysis

The Techniques of data analysis employed by the researcher is the Ordinary Least Squares method using Statistical Package for Social Sciences (SPSS) version 22.0. The aim of using this method is to minimize the error in our prediction of the dependent variable, and by minimizing the residuals, error will be minimized. By using the "squares" the researcher is precluding the problem of signs thereby giving positive and negative prediction errors the same importance.

Data Analysis

Decision Rule: *Reject H_0 if p-value ≤ .05, otherwise do not reject H_0*

SPSS 22 output for MODEL I

Model Summary

Equation 1	Multiple R	.919
	R Square	.844
	Adjusted R Square	.751
	Std. Error of the Estimate	.036

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Equation 1	Regression	.035	3	.012	9.049	.018
	Residual	.006	5	.001		
	Total	.041	8			

Coefficients

		Unstandardized Coefficients		Beta	t	Sig.
		B	Std. Error			
Equation 1	(Constant)	0.130	.048		2.738	.041
	CCC	-0.00004068	.000	-.242	-.669	.533
	SG	-0.004	.001	-.972	-2.997	.030
	DR	0.223	.088	.647	2.532	.052

Table 1. Necessary Variables for Analysis

Year	ROA	CCC	SG	DR	ROS
2007	0.068982	-1345.67	44.11527	0.253646	0.335938
2008	0.075178	-713.15	52.30556	0.535096	0.28747
2009	0.149369	-178.77	35.92346	0.723772	0.36404
2010	0.26197	-301.854	16.0892	0.611961	0.519942
2011	0.235626	-99.717	15.48454	0.496113	0.511499
2012	0.226791	-73.4601	23.12365	0.905644	0.507728
2013	0.244856	-151.457	-0.05317	0.547456	0.541508
2014	0.165553	-116.845	4.58895	0.362832	0.429512
2015	0.161251	-111.361	8.662635	0.299434	0.465868
2016	0.124204	-241.3	#DIV/0!	0.371455	0.437952

Source: Computed from Dangote Cement Plc. Annual Report, 2007-2016 (To access the Raw Data, use https://drive. google.com/file/d/0Byce-T5bSq5HWjNOVHFxYkJyQ3M/ view?usp=sharing)

MODEL I:$ROA = + b_1CCC + b_2SG + b_3DR + \mu$

The multiple R of .919 shows that there is a strong positive relationship between the dependent variable (ROA) and the explanatory variables (CCC, SG and DR) as the multiple R is close to 1. The R^2 of .844 shows that 84.4% of the variation in the dependent variable can be explained by the independent variables. The ANOVA table shows that the model fit is very significant (p = .041<.05). The intercept of 0.130 shows the value of the dependent variable when the independent variables are equal to zero. The slope of -0.00004068, -0.004 and 0.223 shows that a percentage increase in CCC, ROA will decrease by 0.0004068 percent when other variables remain constant; at every percentage increase in SG, ROA will decrease by 0.4 percent when other explanatory variables remain constant; and that at every percentage increase in DR, ROA will increase by 22.3 unit as other variables remain constant. Our regression model will take the following shape: ROA = 0.130 – 0.000040CCC – 0.004SG + 0.223DR + .036

First Hypothesis: *Efficient working capital management does not have positive significant influence on return on assets*

MODEL II:$ROS = + b_1CCC + b_2SG + b_3DR + \mu$

The multiple R of .930 shows that there is a strong positive relationship between the dependent variable (ROS) and the explanatory variables (CCC, SG and DR) as the multiple R is close to 1. The R^2 of .864 shows that 86.4% of the variation in the dependent variable can be explained by the independent variables. The ANOVA table shows that the model fit is very significant (p = .013<.05). The intercept of .416 shows the value of the dependent variable when the independent variables are equal to zero. The slope of -0.00008567, -0.006 and 0.239 shows that a percentage increase in CCC, ROS will decrease by 0.008567 percent when other variables remain constant; at every percentage increase in SG, ROS will decrease by 0.6 percent when other explanatory variables remain constant; and that at every percentage increase in DR, ROS will increase by 23.9 percent as other variables remain constant. Our regression model will take the following shape: ROS = 0.416 – 0.00008567CCC – 0.006SG + 0.239DR + 0.43

Second Hypothesis: *Efficient working capital management does not have positive significant influence on net profit margin*

Decision

The P-value on which basis we can reject the null hypothesis that efficient working capital management does not have positive significant influence on net profit margin is 0.013< 0.5. Since the P-value < .05, we reject the null hypothesis and conclude that efficient working capital management has positive significant influence on net profit margin.

Summary of Findings and Implications

Having subjected the Hypotheses under tests, findings revealed that:

SPSS 22 Output for MODEL II

Model Summary		
Equation 1	Multiple R	.930
	R Square	.864
	Adjusted R Square	.783
	Std. Error of the Estimate	.043

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
Equation 1	Regression	.058	3	.019	10.604	.013
	Residual	.009	5	.002		
	Total	.067	8			

Coefficients						
		Unstandardized Coefficients		Beta	t	Sig.
		B	Std. Error			
Equation 1	(Constant)	.416	.057		7.316	.001
	CCC	-0.00008567	.000	-.398	-1.177	.292
	SG	-.006	.002	-1.171	-3.864	.012
	DR	.239	.105	.541	2.267	.073

Decision

The P-value on which basis we can reject the null hypothesis that efficient working capital management does not have positive significant influence on return on assets is 0.013 < 0.5. Since the P-value < .05, we reject the null hypothesis that efficient working capital management does not have positive significant influence on return on assets and conclude efficient working capital management has positive significant influence on return on assets.

- Efficient working capital management has positive significant influence on net profit margin.
- Efficient working capital management has positive significant influence on return on assets.

This purports the essentiality of efficient management of the variables (Cash conversion cycle, Sales growth and debt ratio) representing working capital management in a profit driven firm. The efficiency of management of working capital has positive significant impact on net profit margin and return on

sales and hence cannot be overemphasized as a consideration for profitability in a firm.

Conclusion and Recommendation

Most manufacturing firms have large amounts of cash invested in working capital. Hence the management of working capital has significant impact on profitability of firms, and this profitability depends on how well working capital is managed. If it is managed efficiently, it means and improvement on profitability and vice versa.

To ensure profitability through efficient working capital management, we recommend:

- That firms should improve their working capital policies in order to enhance corporate profitability.
- That there should be periodical appraisal of investments in working capital using capital investment models, determining ahead the viability of such investments.
- That working capital costs and benefits should be ascertained and compared in order to determine the existence of gains (if any) before investment in the proposed working capital;
- Working capital investment options should be optimally considered.
- Working capital decisions should be based on the net effects of such decisions on cash flow and profitability of the firm in order to ensure optimal decision making.

REFERENCES

Abdulrasheed, A., Khadijat, A. Y., Sulu, I. and Olanrewaju, A. A. 2011. Inventory Management in Small Business Finance: Empirical Evidence from Kwara State, Nigeria. *British Journal of Economics, Finance and Management Sciences, Vol. 1, No. 2, pp. 49 – 57.*

Agha, H. 2014. Impact of working capital management on profitability. *European Scientific Journal, Vol. 2, No. 1, pp. 43-55*

Charterjee, S. 2012. The Impact of Working Capital on the Profitability: Evidence from Indian Firms. *Available at http://ssrn.com/abstract=2125228*

Deloof, M. 2003. Does working capital management affect profitability of Belgian firms? *Journal of Business, Finance and Accounting, Vol, 30, pp. 573-587.*

Egbide, B.C., Enyi, P. E. and Uremadu, S. O. 2012. Working Capital Management, Liquidity and Corporate Profitability among quoted in Nigeria: Evidence from the Productive Sector. *International journal of Academic Research in Accounting, Finance and ManagementSciences. Vol. 2, No. 1, pp. 80-88*

Eljelly, M. A. 2004. Liquidity – Profitability Trade off: An empirical Investigation in an emerging market. *International Journal of Commerce & Management, Vol. 14, No. 2*

Harris, A. 2005. Working Capital Management: Difficult but Rewarding. *Financial Executive, Vol. 21, No. 4, pp 52 – 53.*

Jose, M.L., Lancaster, C. and Stevens, J. L. 1996. Corporate Returns and cash Conversion Cycles. *Journal of Economics and Finance, Vol. 20, No. 1, pp. 33 – 46.*

Makori, M. D., & Ambrose, J. 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, pp. 22-35.*

Michalski, G. M. 2007. Net Working Capital Management Strategies as aFactor Shaping Small Firm Value.*Working Paper, SSRN Electronic Library*, *SSRN – ID: 1000770*.

Mwangi, W. L., Makau, S. M., &Kosimbei, G. 2014. Effects of Working Capital Management on Performance of Non-Financial Companies Listed in NSE, Kenya. *European Journal of Business and Management*

Naeem, U. I., Malik, M. I., Muhammad, A., &Mehboob, H. 2014. Effects of Working Capital Management on Firm Performance: An Empirical Study of Non-financial listed Firms in Pakistan. *International Journal of Academic Research in Business and Social Sciences*

Padachi, K. 2006. Trends in Working Capital Management and its Impact on Firms' Performance: An Analysis of Mauritian Small Manufacturing Firms. *International Review of Business Research papers, Vol, 2, No. 2, 45 – 58*.

Richard, V. D. and Laughlin, E. J. 1980. A cash Conversion CycleApproach to Corporate Profitability. *Financial Practice.*

Smith, K. 1980. Profitability versus Liquidity Tradeoffs in Working Capital Management, in Readings on the Management ofWorking Capital. *West Publishing Company, St Paul, New York.*

Smith, M. Beaurmont and Begemann E. 1997. Measuring Association Between Working Capital and return on investment. *South African Journal of Business Management, Vol. 28, No. 1.*

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