

The Nexus between Working Capital Management and Financial Performance: A Case of Listed Construction and Allied Firms in Kenya

Kizito Ojilong' Omukaga, MBA Student, Mark Namasake Wamalwa,
MBA Student, Francis Mambo Gatumo PhD

United States International University- Africa P.O Box 14634-00800 Nairobi Kenya

Corresponding Author: Kizito Ojilong' Omukaga

Abstract: *Working capital management plays a crucial role in a firm's success or failure because of its effects on an organization's financial performance and liquidity. The purpose of this study was to determine the effects of working capital management on the financial performance of construction and allied firms listed in the Nairobi Securities Exchange in Kenya. The study addressed the following specific objectives: the effects of average collection period on profit after tax and return on equity, effects of cash conversion cycle and profit before tax and return on assets and the effects of average payment period on earnings per share. The study employed a descriptive research design. The study targeted a population of all five construction and allied firms listed at the Nairobi Securities Exchange as at 31st December 2017. Thus, census survey was used. A checklist was used to collect data. Data collected was analyzed using both descriptive and inferential statistics with the aid of the Statistical Package for Social Sciences (SPSS) version 24. The study concluded that there was a significant positive relationship between average collection period and after-tax profit and return on equity while the cash conversion cycle had a moderate positive correlation with the firms' profit before tax and a strong positive correlation with return on assets. However, the study revealed a weak positive correlation between average payment period and earnings per share. Based on the findings, it is therefore recommended that, average collection period and cash conversion cycle should be given more weight than the average payment period when making decisions related to financial performance of listed construction and allied firms in Kenya.*

Keywords: *Working Capital Management, Financial Performance, Construction and Allied Firms, Nairobi Securities Exchange, Kenya.*

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I. Introduction

According to Kwenda and Holden (2013), besides capital structure and capital budgeting decisions, working capital management is another key financing decision that a firm's finance manager considers in the day-to-day operations of the organization. Although many studies have been carried out in the past regarding the relationship between working capital management and firm performance, their findings are varied. This study evaluated the effect of average collection period, cash conversion cycle and average payments period on firms' financial performance measured in terms of profitability ratios and share price performance. To make profit, management should ensure that working capital management components such as current assets and current liabilities are maintained at satisfactory levels. Current assets include items such as work in progress, stock, raw materials, debtors, prepayments, cash and bank balances. Current liabilities comprise of short-term obligations that mature in less than one year. They include, accrued expenses, creditors, short-term debt and taxes payable. Effective working capital management is a major contributor of improved performance in firms and maximizes shareholders' wealth (Cumbie & Donnellan, 2017).

The already existing literature on working capital management is elaborate enough in explaining its relationship with firm's financial performance in terms of profitability and liquidity. Thapa (2013) study on the effect of working capital management on the food and beverage firms in America and Canada for a ten-year period 2000- 2009 concluded that there was a non-linear relationship between cash conversion cycle and profitability. In the European Union, a study was conducted involving 2,974 non - financial firm listed in 11 European Stock Exchanges for a twelve-year period spanning 1998 - 2009. Regression analysis showed a significant negative correlation between Debtors Collection Period, Stock Conversion Period, Payables Deferral Period, Cash Conversion Cycle and firm profitability (Filipa, Garcia, & Vitorino, 2011).

In Nigeria, a research was conducted to examine the effect of working capital management on the profitability of listed conglomerate firms for a ten-year period between 2005 and 2014. Secondary data retrieved from the audited accounts of the firms under review was used. Using regression, the study found out that debtors' collection period, creditors payment period and firm size had a negative relationship with return on investment. On the other hand, cash conversion cycle had a positive but insignificant correlation with firm performance (Abdulazeez, Baba & Fatima, 2018).

In Ghana, a study sought to establish the effect working capital management policies on firms' return. A sample of six listed manufacturing firms in Ghana was used for the period 2000-2013. Secondary data obtained from the audited accounts of the firms under review was used. The study revealed that, in the long-run, financing policies and current asset investment policy measured in terms of total current assets to total assets ratio had a significant positive relationship with firms' financial performance measured in terms of return on equity. The positive coefficient of the current asset investment policy indicates a negative correlation between the level of investment policy aggressiveness and return on equity. Aggressive current asset financing policies on the other hand had significant positive relationship with return on equity in the long-run. This therefore suggests that conservative current asset investment policies are positively correlated with firms' return whereas conservative financing policies are negatively related with firm returns (Adam, Quansah, & Kawor, 2017).

Previous studies on the relationship between working capital management and firm performance in Kenya have generally given a positive relationship. Nyamweno and Olweny (2014) study on some 27 sampled listed firms in Kenya for the period 2003-2012 concluded that trade debtors and cash conversion cycle had an insignificant relationship with firm profitability. However, payables deferral period and inventory period had a significant positive effect on firms' gross operating profit. Kiptoo, Kariuki and Maina (2017) study on tea factories established that inventory management policies had a positive relationship with firm financial performance. Similar findings were exhibited by Muya and Gathogo (2016) and Wembe (2015) studies on the link between working capital management and financial performance of manufacturing firms in Nakuru and Kenya Ports Authority respectively.

The same trend was the case in a study concerning small enterprises in Nakuru and Machakos counties, listed manufacturing firms and listed non-financial firms in general (Kosgey & Njiru, 2016; Nyakundi, Ombuki, Evusa, & Ariemba, 2016). Surprisingly, in all these studies, there is no clear-cut measure that has been set regarding the standard variables that should be used as the ultimate measures of working capital management. Besides, the researcher is not aware of any existing literature specifically discussing the effect of working capital management on financial performance of listed construction and allied firms in Kenya. This study therefore aims to bridge this knowledge gap by assessing the relationship between working capital management and the financial performance of these firms. Average collection period, cash conversion cycle and payables deferral period were used as measures of working capital management whereas profit after tax, return on equity, profit before tax, return on assets and earnings per share were used as financial performance proxies.

The general objective of this study was to evaluate the relationship between working capital management and financial performance of listed construction and allied sector firms in Kenya for the period 2010-2017. To be precise, the study sought to assess the link between average collection period and profit after tax and return on equity, to analyze the correlation between cash conversion cycle and profit before tax and return on assets and finally, to determine the relationship between average payment period and earnings per share. Data of 5 firms listed at the Nairobi Securities Exchange between 2010 and 2017, representing 40 observations was used for the study. Regulatory authorities in Kenya such as the Nairobi Securities Exchange and the Capital Markets Authority will rely on this study's findings to monitor the financial leverage of listed construction and allied firms in Kenya. Besides, they will make informed decisions concerning these firms' solvency when carrying out their oversight role. The next section of this paper presents the literature review on the topic under study followed by the methodology used in the study. The third section discussed the research results. Conclusion and recommendations for future researches was discussed in the final section.

II. Literature Review

2.1.1 Introduction

This chapter dwelt on the literature on previous studies on the relationship between working capital management and firms' financial performance. The chapter is divided into other sections. Section 2.2 of the chapter delved on the relationship between average collection period and profitability. Section 2.3 discussed the association between cash conversion cycle and profitability. Finally, section 2.4 looked at the effect of average payment period on firms' earnings per share.

2.2 Relationship Between Average Collection Period and Profit After Tax and Return on Equity

The average collection period of debtors is the number of days on average it takes a firm to convert debtors into cash. It is the average number of days it takes credit buyers to settle their debts with a business enterprise. The average collection period can be used by the firm owner to gauge its firm's liquidity. The shorter the period, the better the liquidity position of the firm (Kumaraswamy, 2016). When the average collection period is long, then a firm needs to invest a great deal in trade receivables.

Aresearch conducted on a sample of 88 listed American firms established that debtors' collection period had a positive relationship with profitability measured in terms of gross income (Gill, Biger & Mathur, 2010). In Finland, Enqvist, Graham and Nikkine (2011) study for the period 1990- 2008 revealed that debt management and cash conversion cycle were negatively correlated with profitability. In South Africa, a study to investigate the relationship between working capital management and firm performance established a negative relationship between the two variables. A sample of 69 listed manufacturing firms was used spanning between 2007-2016 (Kasozi, 2017). In Botswana, a research on the relationship between working capital management and firm performance on listed retail stores in Botswana covering the period 2012-2016. The study revealed that the relationship between average collection period and firm profitability was statistically insignificant (Sathyamoorthi, Mapharing & Selinkie, 2018). In Ghana, average collection period was found to be positively correlated with return on assets. The study covered the period 2008-2014 for listed manufacturing firms (Tuffour & Boateng, 2017). In Kenya, Makori and Jagongo (2013) found out that average collection period had a negative relationship with corporate profitability. The study sampled 10 manufacturing and construction firms listed at the Nairobi Securities Exchange for the period 2003 to 2012.

2.3 Effect of Cash Conversion Cycle on Firm Profit Before Tax and Return on Assets

Ubesie and Duru (2016) defines cash conversion cycle as the time lag between the point when money is spent on purchase of raw materials and labor and when a sale of a finished product associated with those raw materials occurs. It is the period in which a unit of a given currency is tied up in its current assets. It is calculated by subtracting the average payment period from the sum of average collection period and inventory period in days. A shorter cash conversion cycle is better for the firm since it improves its liquidity. This liquidity has a positive effect on the firm's financial performance. Cash conversion cycle can be shortened in three different ways; first by deciding to sell goods as quickly as possible hence reducing the stock conversion period, speed up debt recoveries by shortening debtors' period. Third, defer payments to suppliers which essentially means lengthening the creditors' deferral period.

In Japan, a study was conducted to investigate the effect of cash conversion cycle on firms' profitability on some sampled Japanese firms for the period 1990-2004. Apart from consumer goods and service firms, the study established that a strong negative correlation between cash conversion cycle and firm profitability (Nobanee, Abdullatif & AlHajjar, 2011). Similar findings were drawn by Muturi (2015) regarding unlisted tea firms in Kenya's Meru County for the five-year period spanning from 2009 to 2013. Ebben and Johnson (2011), study of 879 small manufacturing firms and 833 small retail firms in the United States of America, revealed that cash conversion cycle was positively correlated with firm profitability. Similar findings relate to a study conducted in Sweden for the period 2008-2011 concerning small and medium sized firms. A sample of 3,797 firms was used involving four industries. These findings imply that the better the working capital management, the higher the firm profitability (Yazdanfar & Ohman, 2014).

Zakari and Saidu (2016), study established a positive relationship between cash conversion cycle and profitability of listed Information and Communication Technology firms in the in Nigeria. However, in the same country, a study by Ifeoma and Okpalaukeje (2018) revealed an insignificant negative correlation between cash conversion cycle and return on assets. In South Africa, Kasozi (2017) study on manufacturing firms listed at the Johannesburg Securities Exchange revealed a weak relationship between cash conversion cycle and firm profitability. A sample of 69 manufacturing firms was used covering the period 2007-2016.

2.4 Effect of Average Payment Period on Firm's Earnings Per Share

Average payment period refers to duration between purchase of raw material and payment of cash associated with those raw materials. It is ratio of creditor to the daily credit purchases. Creditors in a business set-up play a crucial role in as far as working capital management is concerned. Delaying payments to suppliers provides a firm with cash that can be used to settle other short-term pressing issues that would have compelled the firm to borrow expensively from the bank. Nevertheless, in the long-run, opportunity cost of maintaining creditors may be detrimental to a firm's cash flows especially in cases where early payment discounts are offered (Waema & Nasieku, 2016). Cash management rules encourage firms to lag payments to suppliers so long as the firm can maintain good relationships with the creditor.

In Pakistan, random sample of 50 listed non-financial firms in the Pakistan Stock Market were picked at random for the period between 2005 and 2014. The study established that there was an insignificant negative

relationship between average payment period and earnings per share with p-value of 0.1932 and coefficient of -0.1609 (Bagh, Nazir, Khan, Khan, & Razzaq, 2016). In Iran, a study investigated the relationship between working capital management and firm profitability. Return on assets, return on equity, profit margin and earnings per share ratios were used as proxies for profitability whereas current ratio and quick ratio were used as proxies for working capital management. A sample of 451-year old firm listed in Tehran Stock Exchange (TSE) was used. The study period was between 2009 and 2012. Using multiple linear regression, the study established that return on assets and earnings per share were negatively related with working capital management (Baygi, Vaghfi, Moghaddam & Khoshrou, 2014). In Nigeria, Madugba and Ogbonnaya (2016) studied the relationship between working capital management and financial performance of manufacturing firms in Nigeria. Multiple regression was used to analyze the secondary data obtained from audited accounts of the firms under review. The study found out that payables' deferral period had a positive relationship with earnings per share.

III. Research Methodology

3.1 Introduction

This chapter presented the research methodology that was used in carrying out the study. It contained the research design, the population and sampling design employed, data collection methods, research procedures and data analysis method used in the study. All these procedures were aimed at helping the researcher, achieve the purpose of the study. A descriptive research design was used because the study sought to determine the relationship between working capital management and financial performance of construction and allied firms listed in the Nairobi Securities Exchange for the period 2010-2017. This study used average collection period, cash conversion cycle and payables deferral period as the independent variables. The dependent variables used to measure profitability and market share performance were profit after tax, return on equity, profit before tax, return on assets and earnings per share (Bono & McNamara, 2011). The population used in the study comprised of all the five construction and allied firms listed in the Nairobi Securities Exchange as at 31st December 2017 namely; Athi River Mining, Bamburi Cement Ltd, Crown Paints Ltd, East African Cables Ltd and East African Portland Cement Company Ltd. Thus, a census survey was used. This study used secondary data obtained from the audited financial statements of the targeted firms. From the financial statements, the researcher used a checklist to gather information about the targeted firms' working capital management measured in terms of average collection period, cash conversion cycle and payables deferral period in days.

Information regarding the said firms' financial performance measured in terms of profitability ratios and market share performance represented by earnings per share was also gathered. Working capital management measured in terms of average collection period, cash conversion cycle and payables deferral period in days represented the independent variables used in the study. Trade receivables, cost of sales, inventories, trade payables, number of days in a year and purchases figures were used to calculate the said independent variables. Profitability ratios namely; profit after tax, return on equity, profit before tax and return on assets and share performance measure namely; earnings per share constituted the dependent variables used in the study. Profit after tax, sales revenue, shareholders' equity, profit before tax, total assets and number of outstanding shares figures were used to calculate the said dependent variables. The secondary data gathered from published accounts of the firms under review was assessed using both descriptive and inferential statistics. The Statistical Package for Social Sciences (SPSS) was used to analyze and test for the reliability of the secondary data collected. Finally, data was presented in form of tables and figures.

IV. Results and Findings

From Table 4.1 below, average collection period had mean value of 78.51 with a standard deviation of 55.21. The standard deviation of 55.21 which is less than the mean shows that the mean value of average collection period is reliable. Among the dependent variables, return on assets had the highest mean of 93.45 followed by return on equity at 83.88, then profit after tax at 78.10, profit before tax at 69.08 then lastly, earnings per share at 23.58. However, all of them had standard deviations lower than their individual means. Hence, mean values could be deemed reliable.

Table 4.1: Descriptive Statistics on Variables

Variable	Observations	Minimum	Maximum	Mean	Std. Deviation
Average Collection Period	40	14.90	222.80	78.51	55.21
Cash Conversion Cycle	40	(136.91)	187.78	58.81	69.56
Payables Deferral Period	40	17.03	320.89	117.68	53.33
Profit After Tax	40	64.00	100.00	78.10	5.29

Return on Equity	40	67.00	100.00	83.88	6.04
Profit Before Tax	40	62.00	100.00	69.08	5.84
Return on Total Assets	40	84.00	100.00	93.45	3.45
Earnings Per Share	40	10.00	100.00	23.58	13.01

Table 4.2: Pearson Correlation between Average Collection Period, Profit After Tax and Return on Equity

		Average Collection Period	Profit After Tax	Return on Equity
Average Collection Period	Pearson Correlation	1	-.766**	-.838**
	Sig. (2-tailed)		0	0
	N	40	40	40
Profit After Tax	Pearson Correlation	-.766**	1	.944**
	Sig. (2-tailed)	0		0
	N	40	40	40
Return on Equity	Pearson Correlation	-.838**	.944**	1
	Sig. (2-tailed)	0	0	
	N	40	40	40

** Correlation is significant at the 0.01 level (2-tailed).

From the Pearson correlation in Table 4.2 above, average collection period had a significant negative correlation with profit after tax and return on equity at -0.766 and -0.838 respectively.

Table 4.3: Pearson Correlation between Cash Conversion Cycle, Profit Before Tax and Return on Total Assets

		Cash Conversion Cycle	Profit Before Tax	Return on Total Assets
Cash Conversion Cycle	Pearson Correlation	1	-.818**	-.968**
	Sig. (2-tailed)		0	0
	N	40	40	40
Profit Before Tax	Pearson Correlation	-.818**	1	.728**
	Sig. (2-tailed)	0		0
	N	40	40	40
Return on Total Assets	Pearson Correlation	-.968**	.728**	1
	Sig. (2-tailed)	0	0	
	N	40	40	40

** Correlation is significant at the 0.01 level (2-tailed).

From the Pearson correlation in Table 4.3 above, cash conversion cycle had a significant negative correlation with profit before tax and return on total assets at -0.818 and -0.968 respectively.

Table 4.4: Pearson Correlation between Payables Deferral Period and Earnings Per Share

		Earnings Per Share	Payables Deferral Period
Earnings Per Share	Pearson Correlation	1	-.568**
	Sig. (2-tailed)		0
	N	40	40
Payables Deferral Period	Pearson Correlation	-.568**	1
	Sig. (2-tailed)	0	

** Correlation is significant at the 0.01 level (2-tailed).

From the Pearson correlation in Table 4.4 above, payables deferral period had a moderate negative correlation with earnings per share at -0.568.

The research sought to determine the causal effect of one variable on another variable. Average Collection Period was used as the independent variable while Profit After Tax was the dependent variable. The adjusted R Square value which indicates the extent by which the independent variable, average collection period, can be used to explain the dependent variable, profit after tax. In this case, 57.6% of the dependent variable could be explained by the independent variable. This is moderate. The other factors account for 42.4% variation.

Table 4.5: Average Collection Period and Profit After Tax Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.766a	0.586	0.576	3.44674

a Predictors: (Constant), Average Collection Period

The researcher did regression using Average Collection Period as the independent variable while Return on Equity was used as the dependent variable. The aim was to establish whether there existed a relationship between the two variables. The adjusted R Square value indicated how much of the dependent variable, return on equity, can be explained by the independent variable, average collection period. From the analysis 69.4% could be explained, which was higher. The other 30.6% could be explained by other factors.

Table 4.6: Average Collection Period and Return on Equity Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.838a	0.702	0.694	3.34442

a Predictors: (Constant), Average Collection Period

The researcher did regression using Cash Conversion Cycle as the independent variable and Profit Before Tax and return on assets as the dependent variable. The aim was to establish the possible causal relationship between these two variables. The adjusted R Square value of 0.661 means that 66.1% of profit before tax can be explained by variation in cash conversion cycle. The other 33.9% could be explained by other factors. Hence, there was a significant positive correlation between the two variables.

Table 4.7: Cash Conversion Cycle and Profit Before Tax Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.818a	0.669	0.661	3.40082

a Predictors: (Constant), Cash Conversion Cycle

The adjusted R Square figure of 0.935 in Table 4.8 above indicates that 93.5% of change in dependent variable, return on assets can be explained by variation in the independent variable, cash conversion cycle. The remaining 6.5% could be explained by other factors. Hence, the correlation between these two variables was high.

Table 4.8: Cash Conversion Cycle and Return on Total Assets Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.968a	0.937	0.935	0.8803

a Predictors: (Constant), Cash Conversion Cycle

The adjusted R Square value of 0.305 representing regression, indicated a lower level of relationship between payables deferral period and earnings per share. This indicates that 30.5% of changes in the dependent variable, earnings per share, can be explained by the independent variable, payables deferral period. The other 69.5% can be explained by other factors.

Table 4.9: Payables Deferral Period and Earnings Per Share Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.568a	0.323	0.305	10.84565

a Predictors: (Constant), Payables Deferral Period

V. Conclusions

5.1 Effect of Average Collection Period on Firms' Financial Performance

Using regression analysis, the study concluded that there was a moderate positive correlation between average collection period and firms' profitability measured in terms of profit after tax and return on equity. The adjusted R square values for the dependent variables were 57.6% and 69.4% respectively. Comparing the p-value with 5% level of significance and the F-calculated from F-Distribution table and the F-value from Anova analysis, the study established that the regression model was significant hence a good predictor of the dependent variables, profit after tax and return on equity.

5.2 Effect of Cash Management on Firms' Profitability

Regression analysis of this study revealed that there was a moderate and strong positive correlation between cash conversion cycle and profit before tax and return on assets because the adjusted R square values were 66.1% and 93.5% respectively. The analysis of variance for both cases indicated that the model was a good predictor of the dependent variable because p-value of 0.00 in both cases was less than 0.05 and the F-calculated values of 4.098 was less than the F-Critical value of 76.891 and 560.638 for profit before tax and return on assets respectively. This is consistent with the existing literature on the effect of cash conversion cycle and firm profitability.

5.3 Effect of Average Payment Period on Firms' Earnings Per Share

According to the regression analysis, there was a weak positive correlation between average payment period and earnings per share because the adjusted R square value was 30.5%. However, according to the analysis of variance, both the p-value and F-Distribution table analysis indicated that the model was a good predictor of the dependent variable. P-value was 0.000 which was less than 0.05 level of significance and the F-calculated values of 4.098 was less than the F-Critical value of 18.107. This finding supports the theoretical correlation that exists between working capital management and firm performance.

References

- [1]. Abdulazeez, D. A., Baba, N., Fatima, K., & A. Y. (2018). Working Capital Management and Financial Performance of Listed Conglomerate Companies in Nigeria. *Journal of Accounting, Finance and Auditing Studies*, 4(2), 49–66.
- [2]. Adam, A. M., Quansah, E., & Kawor, S. (2017). Working Capital Management Policies and Returns of Listed Manufacturing Firms in Ghana. *Scientific Annals of Economics and Business*, 64(2), 255–269.
- [3]. Bagh, T., Nazir, M. I., Khan, M. A., Khan, M. A., & Razaq, S. (2016). The Impact of Working Capital Management on Firms Financial Performance: Evidence from Pakistan. *International Journal of Economics and Financial Issues*, 6(3), 1097–1105.
- [4]. Baygi, S., Vaghfi, S., Moghaddam, A., & Khoshrou, M. (2014). Impact of Working Capital Management on Profitability Ratios: Evidence from Iran. *European Scientific Journal*, 10(1), 374–381.
- [5]. Bono, J. E., & McNamara, G. (2011). Research Design. *Academy of Management Journal*, 54(4), 657–660.
- [6]. Cumbie, J. B., & Donnellan, J. (2017). The Impact of Working Capital Components on Firm Value in US Firms. *International Journal of Economics and Finance*, 9(8), 138–150.
- [7]. Ebben, J. J., & Johnson, A. C. (2011). Cash Conversion Cycle Management in Small Firms Relationships with Liquidity, Invested Capital, and Firm Performance. *Journal of Small Business and Entrepreneurship*, 24(3), 381–447.
- [8]. Filipa, J., Garcia, L., & Vitorino, F. (2011). *The Impact of Working Capital Management Upon Companies' Profitability: Evidence from European Companies*.
- [9]. Gill, A., Biger, N., & Mathur, N. (2010). The Relationship Between Working Capital Management And Profitability: Evidence From The United States. *Business and Economics Journal*, 4(2), 1–9.
- [10]. Ifeoma, O., & Okpalaukeje, V. (2018). Effect of Cash to Cash Cycle on Profitability of Basic Material Firms in Nigeria. *J.Bio.Innov*, 7(1), 12–28.
- [11]. Kasozi, J. (2017). The Effect of Working Capital Management on Profitability: A Case of Listed Manufacturing Firms in South Africa. *Investment Management and Financial Innovations*, 14(2), 336–346.
- [12]. Kiptoo, I. K., Kariuki, S., & Maina, K., E. (2017). Working Capital Management Practices and Financial Performance of Tea Processing Firms in Kenya. *International Academic Journal of Economics and Finance*, 2(3), 92–111.
- [13]. Kosgey, T., & Njiru, A. (2016). Influence of Working Capital Management on the Financial Performance of Small Enterprises; a Survey of Nakuru County. *Journal of Business and Management*, 18(4), 41–47.
- [14]. Kumaraswamy, S. (2016). Impact of Working Capital on Financial Performance of Gulf Cooperation Council Firms. *International Journal of Economics and Financial Issues*, 6(3), 1136–1142.
- [15]. Kwenda, F., & Holden, M. (2013). Working Capital Structure and Financing Pattern of Selected JSE-Listed Firms. *Mediterranean Journal of Social Sciences*, 4(13), 531–540.
- [16]. Madugba, J. U., & Ogbonnaya, A. K. (2016). Working Capital Management and Financial Performance: Evidence from Manufacturing Companies in Nigeria. *European Journal of Accounting, Auditing and Finance Research*, 4(9), 98–106.
- [17]. Muturi, H. M. (2015). Effects of Cash Conversion Cycle on Profitability of Tea Factories in Meru County, Kenya. *International Journal of Economics, Commerce and Management*, 3(8), 552–563.

- [18]. Muya, T. W., & Gathogo, G. (2016). Effect of Working Capital Management on the Profitability of Manufacturing Firms in Nakuru Town, Kenya. *International Journal of Economics, Commerce and Management*, 4(4), 1082–1105.
- [19]. Nobanee, H., Abdullatif, M., & AlHajjar, M. (2011). Cash Conversion Cycle and Firm's Performance of Japanese Firms. *Asian Review of Accounting*, 19(2), 147–156.
- [20]. Nyakundi, T., Ombuki, C., Evusa, Z., & Ariemba, J. (2016). Influence of Working Capital Management Practices on Financial Performance of Small and Medium Enterprises in Machakos Sub-County, Kenya. *International Journal of Sciences: Basic and Applied Research*, 30(4), 286–309.
- [21]. Nyamweno, C. N., & Olweny, T. (2014). Effect of Working Capital Management on performance of Firms Listed at the Nairobi Securities Exchange. *Economics and Finance Review*, 3(11), 1–14.
- [22]. Sathyamoorthi, C., Mapharing, M., & Selinkie, P. (2018). The Impact of Working Capital Management on Profitability: Evidence from the Listed Retail Stores in Botswana. *Applied Finance and Accounting*, 4(1), 82–94.
- [23]. Thapa, P. (2013). *How Does Profitability Get Affected by Working Capital Management in Food and Beverages Industry?* Munich Personal RePEc Archive.
- [24]. Tuffour, J. K., & Boateng, J. A. (2017). Is Working Capital Management Important? Empirical Evidence from Manufacturing Companies in Ghana. *Review of Innovation and Competitiveness*, 3(1), 5–20.
- [25]. Ubesie, M. C., & Duru, A. (2016). Effect of Cash Conversion Cycle Management on the Profitability of Industrial and Domestic Product Firms in Nigeria. *Journal of Investment and Management*, 5(6), 99–106.
- [26]. Waema, P., & Nasieku, T. (2016). Effect of Working Capital Management on the Financial Performance of Listed Manufacturing Firms in Kenya. *Asian Journal of Business and Management*, 4(5), 195–208.
- [27]. Wembe, M. A. (2015). Effects of Working Capital Management on the Performance of Firms in Kenya: A Case Study of Kenya Ports Authority. *International Journal of Science and Research*, 4(4), 1124–1136.
- [28]. Yazdanfar, D., & Ohman, P. (2014). The Impact of Cash Conversion Cycle on Firm Profitability: An Empirical Study Based on Swedish Data. *International Journal of Managerial Finance*, 10(4), 442–452.
- [29]. Zakari, M., & Saidu, S. (2016). The Impact of Cash Conversion Cycle on Firm Profitability: Evidence from Nigerian Listed Telecommunication Companies. *Journal of Finance and Accounting*, 4(6), 342–350.

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