ROLE OF WORKING CAPITAL MANAGEMENT PRACTICES ON FINANCIAL PERFORMANCE OF PRIVATE COLLEGES IN NAIROBI COUNTY

VICTOR EDWARDS ODHIAMBO

The Strategic JOURNAL of Business & Change MANAGEMENT
ISSN 2312-9492 (Online), ISSN 2414-8970 (Print)
Vol.3, Iss. 3 (8), pp 128 - 143, June 17, 2016, www.strategicjournals.com, ©Strategic Journals

ROLE OF WORKING CAPITAL MANAGEMENT PRACTICES ON FINANCIAL PERFORMANCE OF PRIVATE COLLEGES IN NAIROBI COUNTY

[1*] Victor Edwards Odhiambo

[1*] Jomo Kenyatta University of Agriculture & Technology (JKUAT), Nairobi, Kenya

Accepted June 7, 2016

ABSTRACT

This study sought to determine the role of working capital management practices on financial performance of private colleges. By examining financial statements of a sample of 30 registered private colleges in Nairobi County between the period 2013 to 2015. In order to analyse the effects of working capital management on financial performance of private colleges, Return On Assets (ROA) as the dependent variable was used. We defined this variable as the ratio of earnings before interest and tax to assets. Analysis of Variance (ANOVA) – was used to measure the variability of the independent variables and hence show whether the model accounts for most of the variation on the dependent variable. The study revealed that efficient working capital management practices results to increased profitability of private colleges in Nairobi and that proper management of working capital should bring about improved operating efficiencies. This may be achieved by proper planning of cash flows to improve liquidity and maintaining of optimal levels of each working capital component. The study recommended that learning Institutions should ensure that all key departments are computerized and employ qualified staff in financing and accounting department who will ensure that timely and proper reports are generated and sent to management for decision making related to current assets and current liabilities

Keywords: *Working Capital Management (WCM), Average Payment Period(AP), Average Collection Period (AR), Cash Conversion Cycle (CCC) , Inventory Turnover Period (INV), Return On Assets (ROA), Analysis of Variance (ANOVA), Technical and Vocational Education and Training Authority (TVETA), Current Ratio (CR)*

INTRODUCTION

Shifting market conditions have led to costly and insufficient credits from lending institutions which have exposed organizations to high business risks. On the other hand, the expectations of a majority of shareholders are that finance managers are supposed to increase the value of the investment. To overcome these challenges, firms have to adopt plans which include optimizing internal activities such as managing working capital (Burt and Abbate,2009).

Working capital management is the short-term finance of the business which is a closely related to trade between profitability and liquidity. Efficient working capital management seeks to improve the operating performance of a business concern and it helps to meet the short term liquidity. Hence, the study of working capital management is not only an important part of financial management but also an overall management of a business concern (Paramasivan C; Subramanian T, 2009).

According to Brigham & Ehrhard (2004) the main focus of a firm is to determine where the middle ground should be in terms of profitability, solvency liquidity and efficiency in order to maximize shareholder's wealth). A well implemented working capital management strategy contributes significantly to the value of a firm and leads to increased profits.

Low liquidity levels lead to firms being unable to meet their obligations and profitability builds investor confidence and attracts loyalty of which the opposite is also true. Most often, firms fail in the long run because of working capital mismanagement. It follows that working capital management forms a significant part of corporate finance because it affects majorly on a firms liquidity, profitability, risk and value of a firm. Working capital mismanagement leads to financial distress which finally leads to bankruptcy (Emery 1998).

Corporate financial theory is basically about three areas of financial management, that is capital structure, capital budgeting, and working capital management. The goal of working capital management therefore is to ensure that the firm is able to continue its processes and that it has enough cash flow to fulfil both maturing short term debt and future operational expenses. It deals with financing short term financial needs of business organizations. Depending on the industry and nature of a firm, different factors influence the working capital of a firm. The central concern of financial managers in contemporary business practices is trying to identify the drivers of working capital management (Lamberson, 1995).

Therefore, for a college to operate optimally and gain high return on investment there is need to ensure a sufficient level of working capital is maintained. Working capital needs and profitability of firms could be studied to identify the causes of differences between policies adopted by firms and their profitability.

This study sought to address the working capital practises that middle level private colleges need to address in order to meet their financing needs. This will assist these colleges in effectively and efficiently financing their operating activities, which include; Salaries for tutors and non-teaching staff, paying electricity, doing repair and maintenance of buildings and equipment, buying office stationeries among other administration expenses.

Overall Objectives

The main objective of the study was to investigate the role of working capital practices on the financial performance of private colleges in Nairobi County.

Specific objectives

- To analyse the effect of days of accounts receivables on financial performance in private colleges.

- To determine whether inventory period days have any major effect on financial performance of private colleges.
- To explore whether cash conversion cycle days have any significant bearing on the financial performance of private colleges.
- To evaluate whether account payables days contributes to the financial performance of private colleges.

LITERATURE REVIEW

According to Eljelly (2004), the major concern of managers and business owners is to formulate strategies of managing day to day operations in order to meet their obligations as and when they fall due as well as increase profitability and shareholder's wealth. A company should ensure that it has excess liquidity to meet its short-term compulsions (Bhunia, 2010).

Operating Cycle Theory

To determine the length of a firm's operating cycle, a firm need to compute the cumulative days per turnover for inventory investments and accounts receivable. These will give a more realistic indicator of a firm's liquidity position for a given current asset conversion period (Weston and Eugene, 1979). Richards and Laughlin, (1980) point out a deficiency in the operating cycle concept arguing that it fails to consider a firm's time dimension for its current liability commitments. They further argued that incorporating the cash outflow pattern requirements enforced by a firm's current liabilities, is significant for examining liquidity as is for evaluating the related pattern of cash inflows generated by the conversion of its current asset investments.

Cash Conversion Cycle Theory

CCC is calculated by adding inventory period to accounts receivables period and then subtracting accounts payables from it. By approximating these three periods with the financial ratios of inventory days, trade receivables days and trade payables days, the length of the cash conversion cycle (CCC) is given by adding inventory days to trade receivables days less trade payables days Gitman, (1994). By shortening the CCC the company cash flows will have a higher net present value (NPV) because cash is received quicker. A shorter CCC leads to lower investment in the working capital needed by the firm while a higher CCC on the other hand could mean higher profitability by increasing the sales cycle through longer accounts receivable periods. These could however lead to investment rising faster than the benefits of higher Kirkman, (2006).

The Net Trade Cycle Theory

This theory builds on the cash conversion cycle where the components of the CCC are expressed as a percentage of sales. A further study by Shin and Soenen (1998) argued that the net trade cycle is a better working capital efficiency measure comparing with the cash conversion cycle and the weighted cash conversion cycle because it indicates the number of days' income the organization has to finance its working capital. The working capital management team can simply evaluate the financing needs of working capital expressed as a fraction of the expected income growth.

Risk-return trade-off theory

According to Pandey (2011), the management of working capital involves risk and return trade-off. It is not possible to accurately estimate the working capital needs and so a firm must decide about levels of current production to be carried out. Given a firm's technology and production policy, income and demand conditions and operating efficiency, its current assets holdings will depend upon its working capital policy which may follow conservative or aggressive policy and these policies involve risk and return trade-offs

The Cost trade-off theory

This theory postulates that cost of liquidity through low rates of return increases with the level of current assets. Conversely, cost of

illiquidity means holding insufficient current assets whereby a firm will be unable to honor its obligations forcing it to borrow on short-term at high interest rates. This adversely affects a firm's creditworthiness and may limit future access to funds and possible insolvency. A firm should balance the cost of liquidity and cost of illiquidity at equilibrium (Pandey, 2011).

Empirical Literature

The first empirical review that the researcher studied was a study by Raheman and Nasr (2007) who carried out a study on the relationship between CCC and its components. The study took into consideration a sample of 93 listed firms on Karachi Stock Exchange over a period of six years from 1999-2004. The findings revealed that CCC is negatively related to Net Operating Profit (NOP) which is a measure of profitability. Besides CCC, the following were also found to bear similar relationship; inventory turnover in days, average collection period and average payment period.

Another international review was by Samiloglu and Demirgunes (2008) from a study of firms listed at Istanbul Stock Exchange, the effect of working capital management on the profitability was examined, it was established that there exists negative relationship between inventory period, account receivable period and profitability of the companies. The study used multiple regressions. Growth in sales was however found to affect firms positively.

The third empirical review was a study by Lyroudi and Lazaridis (2000) on companies in Greece, it was established that there exists a significant positive relationship between the cash conversion cycle and the traditional liquidity measures of current and quick ratios. The study considered cash conversion cycle as a measure of liquidity for the food industry firms in Greece. The relationship between CCC and the quick ratio was examined through the implications of the cash conversion cycle in terms of profitability, indebtedness, and firm size.

The fifth empirical review was by Afza and Nazir (2007) using cross-sectional data for the period 1998-2003 carried out a study on the relationship between aggressive and conservative working capital policies for 17 industrial groups and 263 firms listed on Karachi Stock Exchange. The data was analysed using Analysis of Variance (ANOVA) and Least Significant Difference test. The results indicated that there was a significant difference among the working capital investment and the financing policies across various industries.

The sixth review was a study by Garcia and Martinez (2007) on the effect of working capital management on SME profitability in Spain measured by RAO using panel data found that an SME's return on assets is reduced by lengthening the number of days' accounts receivable, number of days of inventory and number of days' accounts payable.

Finally, a study by Kulkanya (2012) on the relationship between working capital and profitability (measured by GOP) using a panel regression revealed a significant negative relationship between profits and inventory conversion period, receivables conversion period and cash conversion cycle. Therefore, managers can improve profitability by reducing the cash conversion cycle, inventory conversion period, and receivables conversion period. Accounts payables have an insignificant negative relationship with profitability and managers cannot increase profitability by lengthening the payables deferral period. However, he noted that industry characteristics have an impact on the GOP.

The first local review was a study by Runyora (2012) in her study on the impact of working capital management on the profitability of the oil industry in Kenya found that for oil companies to remain profitable they should have working capital management which will help in making decisions about investment mix and policy, matching investments to objectives, asset

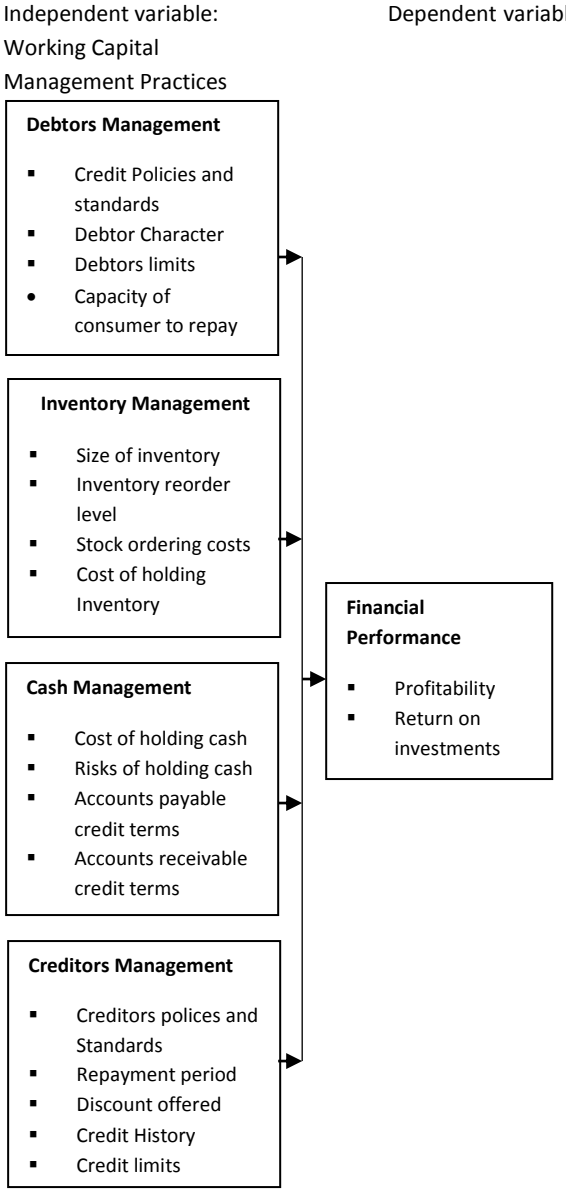
allocation for institutions, and balancing risk against profitability. The second review was a study by Nyagweno & Olweny (2014) on the effects of working capital management on performance of listed firms at Nairobi Stock Exchange measured by a Robust GMM applied to Arellano-Bover/Blundell-Bond linear dynamic panel-data estimation analysis, they found out that AP is an important determinant of GOP and it has a direct effect on GOP. The the third local study was a study by Mogaka & Jagongo (2013) on the effects of working capital management on firm's profitability (measured by ROA) using panel data, found out that there is a significant negative relationship between profitability and number of AR and CCC, but an insignificant positive relationship with INV and AP(significant). Financial leverage, sales growth, current ratio and firm size were used as control variables and were found to have significant effect on the firm's profitability.

Another local study reviewed was by Kithii (2008) in his study to establish how efficient the firms are managing their working capital, undertook a study on the relationship between working capital management and profitability of quoted firms at the NSE. The study was carried out for the period 2001 –2006. The study results revealed that besides the average payment period which showed a positive relationship, there was a statistical negative relationship between a firm's components of working capital management and profitability.

The final local review was a study by Muchina and Kiano (2011), while studying the influence of working capital management on firms' profitability, a case study of SMEs in Kenya, found out that average debtors days, stock turnover period and cash conversion cycle significantly affect firm profitability. Financial leverage, ratio of current ratio and firm size had a significant impact on the profitability. This study however did not find out the direction of the relationship between cash conversion cycle.

Conceptual Framework

Figure 2.1 Conceptual Framework



RESEARCH METHODOLOGY

To remain consistent with other studies (Garcia & Martinez (2007), Mogaka & Jagongo (2013), this study used a system generalized method of ROA employed to dynamic panel data for the analysis. A descriptive research design was used to establish the relationship between independent variable and its effects on the dependent variables. The study targeted 100 principals of private colleges licensed by Technical and Vocational Education and Training Authority in 2015. A sample of 30 colleges was studied. The

study applied random stratified sampling procedures to obtain the respondents for questionnaires. The sample frame of the study included a representative sample of the principals of the colleges in and out of the Central

Data Collection

The researcher used personal administered questionnaires to obtain the data from the respondent in these colleges. The specific data collected was in form of fixed assets, accounts

Data Analysis

To determine the relationship between the variables, the data was analyzed through the use of a multivariate regression model

Model I: The relation between Average collection period, Inventory Turnover in Days, Average Payment Period, Current Ratio, Natural logarithm of total fees paid /income, Degree of Financial Leverage and profitability:

Model I: ROA it = ß0 + ß1 (AR it) + ß2 (INV it) + ß3 (AP it) + ß4 (CR it) + ß5 (LN it) + ß6 (LEV it) +ε.

Model II: The relation between Cash Conversion Cycle, Current Ratio, Natural logarithm of income, Degree of Financial Leverage and profitability:

Model II: ROA it = ß0 + ß1 (CCC it) + ß2 (CR it) + ß3 (LN it) + ß4 (LEV it) + ε

RESEARCH RESULTS AND DISCUSSION

Descriptive statistics

From table 1, the results reveal that colleges receive payment from debtors after an average of 72 days, and has standard deviation of 48 days. Here, maximum time taken by a college to receive their income was 177 days, while minimum time was only 17 days. A similar research done by Kaburi (2007) but targeting public schools revealed that debtor's collection period was 80 days. Average variations could be as a result of differences in fees payment policies, competitive pressure or inefficient management among the sampled colleges. The average Payable Conversion period was 139 days with a standard deviation of 42 days. The maximum Payable Conversion Period used by a college was 180 days. The minimum level of the Payable Conversion period was 34 days. Kaburi (2007) found out that payable conversation period was 90 days. The variation could be as a result of the college's payment policies.

The inventory conversion period of the firms was averagely 158 times with standard deviation of 74 times, a maximum of 297 times and minimum conversion period of 34 times. The results by Kungu J. Njui N and Kimani L. (2014) gave a inventory conversion period of the firms was averagely 86 times with standard deviation of 60 times, a maximum of 212 times and minimum conversion period of 15times . The variations could be as a result of efficient inventory policies, automation of inventory purchase. Cash Conversion Cycle was on average -87 days and standard deviation was about 67 days. CCC which is used to check the effectiveness in working capital management had a maximum conversion period of 14 days and a minimum conversion period of -200 days. The mean value of return on total assets was 29.86% with standard deviation of 25.45%. It means that the profitability can deviate from mean to both sides by 25.45%. The maximum value for return on assets was 55.60% while the minimum was 5%. The results by Kungu J. Njui N and Kimani L. (2014) were Cash Conversion Cycle was on average -77 days and standard deviation was about 57 days. working capital management had a maximum conversion period of 9 days and a minimum conversion period of -187 days.

Table 1: Descriptive statistics

Variables	N	Minimum	Maximum	Mean	Std. Deviation
ROA	30	.05	.556	.2986	.25448
AR	30	16.99	177.96	71.6201	47.80619
INV	30	24.47	296.67	158.3819	74.29066
AP	30	33.79	180.88	139.2752	42.13436
CCC	30	-199.86	14.09	-86.7268	66.72112
CR	30	.32	5.73	3.2044	1.63839
LOS	30	.00	.00	.0002	.00002
LEV	30	.02	.68	.1861	.21002

Correlation Results

Table 2 indicates the correlation between dependent variable (ROA) and independent variables that is (AR, INV, AP, CCC, CR, LOS and LEV). The results as shown in Table 8 reveal that satisfactory performance of college managers would increase profitability by reducing CCC. AR and CCC are negatively correlated with ROA indicating that if the both duration of both increase, it will have a negative impact on the profitability. AP and INV are both positively related with ROA meaning that an increase in AP and INV leads to increase in ROA. Also the results reveal that LOS and CR are directly correlated with GOP indicating that profitability increase with increase in both size of the firms and leverage. Consistent results have been obtained by Joana, Vitorino, & Moreira (2011), Vural, Sokmen, & Çetenak (2012), Baveld (2012) and Nyawita & Olweny (2013). Mogaka & Jagongo (2013) further found out that AP and CCC are indirectly related to ROA and the trio of INV, LOS and APP being directly related. The direct relation between profitability and AP means that lagging payments to suppliers ensures that firms have enough to purchase more inventories for resale thus increasing its sales levels and boosting their profits. Amount of Leverage size was also found to be positively related to ROA meaning that colleges with higher finance debts report higher profits compared to those without finance debts. This is due to the fact that interest on debt is tax allowable.

Table 2: Pearson Correlation matrix

		ROA	AR	INV	AP	CCC	CR	LOS	LEV
ROA	Pearson Correlation	1							
	Sig. (2-tailed)								
	N	30							
AR	Pearson Correlation	-.107	1						
	Sig. (2-tailed)	.043							
	N	30	30						
INV	Pearson Correlation	-.228	-.172	1					
	Sig. (2-tailed)	.225	.363						
	N	30	30	30					
AP	Pearson Correlation	.348	-.209	-.039	1				
	Sig. (2-tailed)	.059	.267	.837					
	N	30	30	30	30				
CCC	Pearson Correlation	-.490	.894**	.124	-.547**	1			
	Sig. (2-tailed)	.034	.590	.513	.002				

	N	30	30	30	30	30			
	Pearson Correlation	.391*	.444*	-.288	-.261	.402*	1		
CR	Sig. (2-tailed)	.035	.014	.122	.163	.028			
	N	30	30	30	30	30	30		
	Pearson Correlation	.154	-.364*	-.184	.255	-.453*	-.165	1	
LOS	Sig. (2-tailed)	.418	.048	.332	.173	.012	.384		
	N	30	30	30	30	30	30	30	
	Pearson Correlation	.877*	.426*	-.145	.601**	.136	-.295	-.054	1
LEV	Sig. (2-tailed)	.000	.030	.479	.001	.507	.143	.794	
	N	30	330	30	30	30	30	30	30

*. Correlation is significant at the 0.05 level (2-tailed).

Regression Results

Model I: From table 3 R-square is the Coefficient of determination that explains the extent to which changes in the dependent variable can be explained by the change in the independent variables or the percentage of variation in the dependent variable (ROA) that is explained by all the six independent variables (AR, INV, AP, CR, LN and LEV). From Table 8, the value of R-Square is 0.752. This implies that, 75.2% of variation of ROA was explained by AR, INV, AP, CR, LN and LEV. From the findings, there is remaining 24.8% which implies that there are factors not studied in this study that affect ROA. The 24.8% variation not explained by all the six independents variables in this study may include other factors such as capital structure of a firm, inflation, size of the organization and fixed asset financial asset ratio.

Table 3: Model Summary

Model	R	R Square	Adjusted R Square
1	.867	.752	.687

Amjed (2011) highlighted the impact of capital structure on firm's performance while taking the sample of Pakistan's Chemical industry. He claimed that a firm with equity financing has larger free cash flow, freedom to take operational decisions and flexibility to take risk. If a firm has lower degree of debt then it can move to more productive but riskier projects and lenders prefer these types of firms. Optimal capital structure can be achieved where cost of debt is less than benefits of debt. With the optimal capital structure, stockholders get higher return. He claimed that long term debt has a negative impact on firm's performance and short term debt has a positive impact on firms. His results also revealed that profitable firms favour internally generated funds.

The Table 4 shows that the independent variables statistically predict the dependent variables ($p=0.001<0.05$). This means that the regression model is a good fit for the data. The results in the ANOVA table above reveal that the model is significant since it has a significance level less than the Alpha set at 0.05. The model explains the deviations in the dependent variable (ROA). The deviation is a results of the standard standard error identified in the model which was a little larger because it also takes into account the errors in estimating the coefficients and the relative extremeness of the values of the independent variables for which the forecast is being computed. If the sample size is large and the values of the independent variables are not extreme, the forecast standard error will be only slightly larger than the standard error of the regression.

Table 4: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.739	6	.457	11.608	.000
	Residual	.905	23	.039		
	Total	3.644	29			

a. Dependent Variable: ROA

b. Predictors: (Constant), LEV, LOS, INV, CR, AP, AR

Model II:

From Table 6, the value of R-Square is 0.631. This implies that, 63.1% of variation of ROA was explained by CCC, CR, LN and LEV. From the findings, there is remaining 36.9% which implies that there are other factors that affect ROA rather than the above mentioned factors.

Results of Table 7, shows that the independent variables statistically predict the dependent variables (p=0.020<0.05). This means that the regression model is a good fit for the data. The results in the ANOVA Table 8 below reveal that the model is significant since it has a significance level less than the Alpha set at 0.05. The model explains the deviations in the dependent variable (ROA).

ROA it = 0.010 -0.011(CCC it) -0.068(CR it) +2054.18 (LN it) +1.173 (LEV it) From the findings in Table 8, at 5% level of significance, CCC is a significant predictor of ROA since (p=0.0429<0.05).

Table 5: Model Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	(Constant)	.343	.357		.958	.348
	AR	-.008	.006	-.228	-1.159	.258
	INV	.061	.001	.290	-2.543	.018
	AP	.0031	.001	.373	-2.116	.041
	CR	-.070	.032	.325	-2.176	.040
	LN	1571.956	1698.565	.109	.925	.364
	LEV	1.702	.392	.936	4.347	.000

Table 6: Second Model Summary

Model	R	R Square	Adjusted R Square
1	.794	.631	.572

Table 7: ANOVA for the Second Model

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.969	4	.492	23.935	.020
	Residual	.432	21	.021		
	Total	2.401	25			

a. Dependent Variable: ROA

b. Predictors: (Constant), LEV, LN, CR, CCC

Table 8: Second Model Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.010	.393		.025	.980
	CCC	-0.011	.000	.014	.089	.0229
	CR	-.068	.030	-.313	-2.236	.035
	LOS	2054.031	1962.245	.143	1.047	.305
	LEV	1.173	.235	.645	4.995	.002

a. : Dependent Variable: ROA

CR is a significant predictor of ROA since (p=0.035<0.05). This was consistent with results obtained by Eljelly (2004) which found out that CR, was also positive and significant in determining ROA. This may indicate that from one year to another, liquidity is a consequence of ROA, i.e. the companies that were able to reach positive income results over a certain year were able to keep a higher liquidity level on the following year. Also the highly significant and positive correlation between CR and CR, shows that the liquidity ratio is highly dependent of its own previous year ratio. The same can be said about profitability, for the companies of the sample the liquidity and profitability ratio were quite stable through the year

LN is not a significant predictor of ROA since (p=0.305>0.05). This may be due to the fact whether the tuition fees are high or low in any particular academic year the student will not drop out of college.

LEV is a significant predictor of ROA where (p=0.002<0.05). A study by Joana, Vitorino, & Moreira (2011) found out that Short debt is positively correlated with profitability since interest on debt is tax allowable hence the more debt a firm has the more tax benefits the firm will receive hence higher returns.

Effect of accounts receivables on college profitability

From the findings in Table 4, at 5% level of significance, AR is not a significant predictor of ROA since (p=0.258>0.05). but has a negative effect on ROA meaning an increase in the AR leads to a decline in ROA. A one-day increase in AR is associated with 8% decrease in profitability. This negative relationship is consistent with the cost trade-off theory. Similar findings were reported by Baveld (2012), Joana, Vitorino, & Moreira (2011). This therefore means that a more restrictive credit policy will improve performance of a firm.

Effect of accounts payables on college profitability

AP is an important determinant of ROA since (p=0.041<0.05) at 5% confidence interval as revealed in Table 4 with a direct effect on ROA meaning that a one day's increase in the days of accounts payables is associated with increase in ROA by 0.031%. This is consistent with findings by (Mathuva, 2010). This is true because colleges will utilize the cash due to the creditors so to increase their production thereby influencing their profitability. These results are the same with the results obtained by Raheman and Nasr (2007) who found out that accounts payables have a negative effect on a firm's profitability.

Effect of days' inventory on college profitability

The results in Table 4 reveal that**,** the days in inventory is found to have a direct and significant effect on ROA (p= 0.018<0.05). This is means that one day stay in inventory leads to a 0.061% increase in ROA.) Therefore, an adequate and timely flow of inventory is imperative for the success and growth of any College. This is consistent with a conservative working capital management policy. This means maintaining high levels of inventory will in turn reduce the cost of possible stock out. This result is consistent with that of Mathuva (2010). However, this result is somewhat different from that of Baveld (2012), Stephanou (2010), Kulkanya (2012), Panigrahi(2013), and Garcia-Teruel & Martinez-Solano, (2007), who found an indirect relationship of days in inventory and profitability. The differences may be attributed to the regression analysis methodology that was employed by this study. The study result was consistent with operating cycle theory which postulates that inventory turnovers show the frequency with which a firm converts its cumulative stock of raw material, work-in-progress and finished goods into product sales which influences profitability.

Effect of cash conversation cycle on college profitability

Table 8 shows that CCC has an indirect but a significant (p=0.0229<0.05) effect on ROA. That is interpreted to mean that a one-day increase in cash conversion period, leads to decreases in profitability of 0.011% hence for managers to increase profitability, they should reduce the CCC. The results obtained were also consistent with cost trade-off theory and the findings of Mathuva(2010), Baveld(2012), Stephanou(2010), and Muchina and Kiano (2011), while studying the influence of working capital management on firms' profitability, a case study of SMEs in Kenya, found out that average debtors days, stock turnover period and cash conversion cycle significantly affect firm profitability. These results are consistent with Cash Conversion Cycle Theory which argues that by shortening the CCC the company cash flows will have a higher net present value (NPV) because cash is received quicker. A shorter CCC leads to lower investment in the working capital needed by the firm while a higher CCC on the other hand could mean higher profitability by increasing the sales cycle through longer accounts receivable periods. These could however lead to investment rising faster than the benefits of higher Kirkman, (2006).

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The Pearson correlation coefficient analysis revealed that ROA had a significant relationship with AP, CCC, Leverage and LN. There are however other variables such as AR and INV where even if there were slightly higher correlation, the relationship was not as strong hence not significant. In correlating working capital variables (AR, INV, AP, CR, LN and LEV) in the first model it was observed that the whole relationship had a high coefficient of determination measuring 75.2. % indicated by R square and 66.1% from the second model where working capital element was CCC. This means that the independent variables in both models statistically predict the dependent variables (ROA).

On the specific objectives of the research, the researcher found out that Account payables days affect the financial performance of the colleges, such that those colleges with longer credit days are more profitable. This can be because the money is invested in profit generating investments which earn return on investments rather than paying debts. Account receivable days and inventory days had no significant effect on financial performance while cash conversion circle days had effect on financial performance since the shorter the cycle the more profitable the college

From the findings, the researcher concluded that effective monitoring and controlling of working capital is important since it enables an organization to manage its financial resources and operate efficiently. Without good working capital management, businesses cannot achieve efficiency and profit maximization. Organizations are therefore expected to maintain an optimal level of working capital to remain competitive and profitable.

Study Recommendations

The first recommendation is that organizations should have effective debtor's policy that is adhered to by all the stake order. Effective debtor policy is the one that tries as much as possible to reduce the period for collecting receivables from clients. From the study the study results, there exists a negative relationship between average collection period and firm's profitability. This therefore means that an increase in the period results to a decrease in profitability

Second recommendation is that for proper working capital management in private institutions of higher learning should be managed by those with financial management skills and not be left to perception or the rule of the thumb by principals of the colleges. This calls for a well written policy for recruitment of finance members of staff. Institutions should ensure that all key departments are computerized and employment of qualified accounts staff who will generate reports to management for decision making related to current assets and current liabilities.

A third recommendation is that organization need to have a proper liquidity policy since proper management of working capital brings about improved operating efficiencies. This may be achieved by adequate records relating to each working component, proper planning of cash flows to improve liquidity and maintaining of optimal levels of each working capital component.

Finally, there should also be a constant review of working capital policies to ensure that it incorporate the changing trends. For example, use of information technology in a full budgetary control system could be adopted which will include, inventory, accounts payables and receivables and cash budget. Inventory and cash control techniques could also be applied in a computerized environment. Credit control procedures for fees payment, suitable for these training institutions should be adopted.

Recommended areas for further research

Further study should be conducted using quarterly data as this way the various components of working capital will be subjected to a more robust regression with increased number of observations. It would be even more precise when average quarterly data is used for the number of day's accounts receivables, accounts payables and inventories. Similar study should be conducted in future on how private colleges in Kenya make decisions around working capital management and how it affects their profitability.

Further research can also focus on carrying out an analysis at different business cycle. This can be done as a case study of selected colleges because at different stages of business growth, businesses are expected to manage working capital differently while trying to maximize profits. It is expected that a college that is starting might want to allow more days in accounts receivable than normal so as to attract more students which translates to increased tuition fees while at the same time it may want to reduce the same as it studies the student's ability to pay. All these actions can be verified by conducting a study in that area. Similar studies should be done in order to find out which other factors apart from working capital component affects profitability of private colleges in Kenya.

Finally, further study should also consider using a different measure of financial performance other than ROA. In case of colleges GOP, EPS among others can be used as a measure of profitability.

REFERENCES

Afza, T. & Nazir, M. S. (2008). *Working Capital Management Policies of Firms*. Retrieved from Empirical EvidencefromPakistan.PakistanJournalofCommerceandSocialSciences. : https://www.researchgate.net/publication/228618942_Working_Capital_Requirements_and_the_Determining_Factors_in_Pakistan

Anandasayanan, S. (2014). *Working Capital Management and Corporate Profitability*. Retrieved from EvidencefromPaneldataanalysisofselectedquotedcompaniesinSriLanka.Retrieved0422,2014,from Social Science Research Network: http://ssrn.com/abstarct=2385940

Anser Raheem & Malik Qaisar Ali . (2013). Cash Conversion Cycle and Firms Profitability – A Study of Listed Manufacturing Companies of Pakistan. *OSR Journal of Business and Management (IOSR-JBM) e-ISSN: 2278-487X. Volume 8, Issue 2 (Jan. - Feb. 2013),*, 83-87.

Brigham, E. F. & Ehrhard, M. C. (2004). *Financial Management: Theory and Practice,11th Edition.* New York: South-Western College Publishers.

Burt, T. and Abbate ,V. (2009). Review on working capital management financial essay. *Financial executive*, pp. Vol.25, issue 9, p. 54-55.

Charitou, M., M. Elfani, & Lois, P. (2010). The Effect of Working Capital Management On Firm's Profitability: Empirical Evidence From An Emerging Market. *Journal of Business and Economics Research, (8)12, 63-68, Dec 2010.*

Deloof, M. (2003). Does Working Capital Management affect Profitability of Belgian Firms? *Journal of Business, Finanace & Accounting Vol.30*, 573-587.

Eljely, A. M. (2004). Liquidity-Profitability Trade Off : An emprical investigation in an emerging market. *International Journal Of Commerce and Management, Vol.14 Iss:2*, 48-61.

Emery, G. W. & Marques, M. A. (2011). The Effects of Transaction Costs, Payment Terms And Power on the Level of Raw Materials Inventories. *Journal of Operations Management*, 29(1), 236-249.

Gitman, L. J. (1994). Estimating corporate liquidity requirement: A simplified approach. *FInance Revision Journal,*, 9(1), 26-35.

Karabay, &. G. (2013). Retrieved from www.tekstilvekonfeksiyon.com/.../20130429122743

Karunarathne WVAD and Kumari PWNA,. (2008). *Working Capital Problems faced by SMEs in Sri Lanka, Annual Research symposium.* Sri Lanka: Faculty of Graduates Studies, University of Kelaniya.

Kirkman, P. (2006). *Morden Credit Management,.* London.: George Allen and Unwin.

KNBS, K. B. (2015). *Kenya Facts and Figures*. Retrieved from http://www.knbs.or.ke/index.php

Kulkanya, N. (2012). Effects of Working Capital Management on the Profitability of Thai Listed Firms. . *International Journal of Trade, Economics and Finance,*, 227-232.

Kungu J. Njui N. Kimani L. (2014). Working Capital Management in Government Technical Training Institutions in Kenya. *IOSR Journal of Economics and Finance (IOSR-JEF) e-ISSN: 2321-5933, p-ISSN: 2321-5925.Volume 5, Issue 5.* Retrieved from www.iosrjournals.o

Lamberson, M. ((1995)). Changes in Working Capital of Small Firms in Relation to Changes in Economic Activity. *Mid-American Journal of Business*, 10(2), 45-50.

Lazaridis, I. & Dimitrios, T. (2005). *The relationship between working capital management and profitability of listed companies in the Athens Stock Exchange.* Retrieved from Retrieved from http://ssrn.com/ on 8th June 2014.

Lyroudi, K. & Lazaridis, J. (2000). *"The Cash Conversion Cycle and Liquidity Analysis of the Food Industry in Greece.* Retrieved from Electronic Version. EFMA 2000 Athens,: http://ssrn.com/paper=236175 on 5th April 2014.

Mathur, B. S. (2003). *Working Capital Management and Control Principles and Practice, and Control Principles and Practice.* New Delhi.

Mathuva, D. (2009). The Influence of Working Capital Management Components on Corporate Profitability: A Survey on Kenyan Listed Firms. *Research Journal of business Management*, Retrived from www.docsdrive.com/pdfs/academicjournals/rjbm/0000/15988-15988.pdf May 2014. Retrieved from Management, retrieved from

Mian, S., & Smith, C. W. (1992). Accounts Receivable Mamgement Policy: Theory and Evidence. . *Journal of Finance*, 169-200.

Mogaka, D., & Jagongo, A. . (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*, 1-14.

Nasr Mohamed & Rehman Abdul. (2007). Working capital management and profitability-case of Pakistani firms. *International Review of Business review papers,*, l3(1), 279-300.

Ngaba, D. K. (1990). Working Capital Management Practices in Kenya Secondary Schools: Kikuyu Division, Kiambu District Nairobi University press.

Nyamweno Nyarige Cyprian & Olweny Tobias . (2014). Effects of Working Capital Management of Listed Firms in Nairobi Stock Exchange. *Economics & Finance Review Vol. 3*, 0114.

Nyandemo, K. S. (2007). *Working capital management Practices : A case study of secondary schools in Gucha District.* Nairobi: Nairobi university Press.

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*, 2(2), 45-58.

Pandey, I. M. (2011). Working Capital Management. In I. M. Pandey, Financial Management. New Delh: Vikas Publishing House PVT Ltd.

Panigrahi, A. K. (2013). Relationship between Inventory Management and Profitability: An Empirical Analysis of Indian Cement Companies. *Asia Pacific Journal of Marketing & Management Review*, 107-120.

Paramasivan C. ; Subramanian T. (2009). *Financial Management.* New Delhi: New Age International Pvt. Ltd.

Richards, V. & Laughlin, E. (1980). . A Cash Conversion Cycle Approach to Liquidity Analysis. *Financial Management*, 9(1), 32 – 38.

Runyora, E. (2012). The impact of working capital management on the profitability of the oil industry in kenya. *Unpublished MBA project. University of Nairobi.*

Shin H. H., Soenen L. (1998). Efficiency of Working Capital and Corporate Profitability. *Financial Practice and Education 8*, 37-45.

Simeon, S. K. (2007). *Working Capital Management practises. A Case Study of Secondary schools in Sameta Division Gucha District. Master's Thesis: University of Nairobi.* Retrieved from http://ir-library.ku.ac.ke/handle/123456789/1740

Stephanou. (2010). The effect of Working Capital Management on Firm's Profitability: Empirical Evidence from an Emerging Market. *Journal of Business and Economic Research*, 63-68.

Teruel Garcia & Solano Martinez. (2007). Effects of Working Capital on SME profitability. *International Journal of Managerial Finance*, 164-177.

TVET, T. a. (2012). *Seasonal paper 14 reforms of education sector in kenya.* Retrieved from Ministry of Education: http://www.education.go.ke/Documents.aspx?docID=1708

UNESCO. (2004). *Community schools in Kenya. Case study on community participation in funding and managing schools.* . Retrieved from http://www.unesco.org/iiep/PDF/pubs/Kenya_B185.pdf

Verlyn D. Richards & Eugene J. Laughlin. (1980, January). *A Cash Conversion Cycle Approach to Liquidity Analysis.* Retrieved from https://www.researchgate.net/publication/247687672_A_Cash_Conversion_Cycle_Approach_to_Liquidity_Analysis

Vural Sokmen , G., A. G. & Çetenak, E. H. (2012). Effects of Working Capital Management on Firm's Performance: Evidence from Turkey. *International Journal of Economics and Financial Issues*, 488-495.

Weinraub, H.J & Visscher, S. . (1998). Industry Practice Relating To Aggressive Conservative Working Capital Policies. . *Journal of Financial and Strategic Decision* , 11(2), 11-18.

Weston, J. F. & Eugene, F. B. . (1979). *Essentials of Managerial Finance (5th Ed.).* Hinsdale: The Dryden Press.