IMPACT OF WORKING CAPITAL MANAGEMENT ON THE PROFITABILITY OF SMEs IN TANZANIA

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Abstract

A well designed and implemented working capital management is expected to contribute positively to the SMEs profitability. The purpose of this paper is to examine the relationship between working capital management and SMEs profitability and determine the impact of working management on SMEs profitability. The dependent variable, gross operating profit is used as a measure of profitability and the relation between average collection period, inventory conversion period, cash conversion cycle and average payment period to the SMEs profitability is investigated for a sample of 38 Tanzanian SMEs, using annual financial statements data analysis for the period 2006 – 2011. This study employs Regression analysis to determine the impact of average collection period, inventory conversion period, cash conversion cycle and average payment period on gross operating profit taking current ratio, size of the firm, financial debt ratio as control variables. The results indicate that there is a significant negative linear relationship between average collection period, inventory conversion period and cash conversion cycle on one hand and profitability on the other hand. There is also negative correlation between average payment period and gross operating profit. The relationship between two control variables viz; current ratio, financial debt ratio and gross operating profit indicate the expected negative relationship whereas the firm size indicate unexpected negative relationship.

KEY WORDS

Average collection period, Average payment period, Cash conversion cycle, Inventory conversion cycle, SMEs Profitability

1.0 Introduction

Small businesses are viewed as an essential element of a healthy and vibrant economy in developing countries. They are seen as vital to the promotion of an enterprise culture and to the creation of jobs within the economy (Bolton Report, 1971). Small Medium-Sized Enterprises (SMEs) are believed to provide a momentum to the economic progress of developing countries and its importance is gaining widespread recognition. In Mauritius the SMEs occupy a central place in the economy, accounting for 90% of business stock (those employing up to 50 employees) and employing approximately 25% of private sector employees (Wignaraja and O'Neil, 1999). Working capital management plays a pivotal role in the efficient functioning of SMEs. Most of the SMEs for their working capital funds depend on short term financing like bank loans over drafts etc. However, given their reliance on short-term funds, it has long been recognized that the efficient management of working capital is crucial for the survival and growth of small firms (Grablowsky, 1984; Pike and Pass, 1987).

Effective management of working capital facilitates the increase the size of the business activities by increasing total sales consequently increasing recycling of funds and generating higher profitability. As against this, if management fails, it results into long average collection period (ACP), inventory conversion, cash conversion cycle and average payment period (APP), leading to reduced recycling of funds, ultimately effecting profitability and liquidity of the enterprises. A large number of business failures have been attributed to inability of business managers to plan and control properly the working capital of their respective firms. In Tanzania very little have been done concerning working capital management practices in SMEs. However SMEs in Tanzania contribute significantly to employment creation, income generation and stimulation of growth in both urban and rural

areas, in-turn contributing to the development of the country as a whole economically. MSEs employ more than 2.4 million people (Nchimbi, 2003) while contributing about one third of the Tanzanian GDP (IFC 2009) and about 20–30% of the labour force (Mittah, 2009). Keeping this in view and wider recognition of the potential contribution of SME sector to the economy of Tanzania, it motivates to attempt a study on the impact of working capital management on the profitability of SMEs in Tanzania.

The purpose of this study is to provide an econometric impact of average collection period, inventory conversion period, cash conversion cycle and average payment period on gross operating profits of SMEs in Tanzania. The paper deals with presentation of a review of the empirical literature, Methodology in terms of sample size, data source, variables used measurement of variables and estimation techniques. It also presents analysis and results of the study, conclusion and suggestion for improvement and scope for future research.

2.0 Literature Review
This study provides clear meaning of terms and concepts and also reviews the findings of the previous researchers. This helps to clearly identify the gap and therefore justify the need of doing the study on the impact of working capital management on SMEs profitability in Tanzania.

2.1 Conceptual Reviews
Concept of SMEs: According to the ministry of industry and trade in Tanzania, small businesses are collectively defined under nomenclature SMEs. SME is used to mean micro, small and medium enterprises. It is sometimes referred to as micro, small and medium enterprises (MSMEs). In Tanzanian context micro enterprises are those engaging up to four people in most cases family members or with an investment not exceeding 5 million TSHs the majority of which fall under the informal sector. Small

enterprises are mostly formalized undertakings engaging 5 to 49 employees or with capital investment of TSHs 5 million to TSHs 200 million. Medium enterprises employ about 50 to 99 employees and capital investment from about 200 to 800 million TSHs (Tanzania SMEs policy 2002). This definition was used in this work keeping in mind that the population of interest was Tanzania SMEs.

Working capital (WC) is a financial metric which represents the amount of current assets that have not been supplied by the current, short term creditors (Van Horne (1977). Working capital is one of the defining factors of business profitability and it has four main elements; receivables, inventories, payables and cash conversion cycle. Putting into consideration the four elements of WC the firm's profitability is influenced by the time required by the firm to collect its receivables (Average collection period), time required to convert inventory into cash (Inventory conversion period), time required to pay the outstanding accounts (Average payment period) and time required by the firm to circulate cash (Cash conversion cycle). In this study the management of Average collection period, Inventory conversion period, Average payment period and Cash conversion cycle is expected to impact the SMEs profitability.

Working Capital Management (WCM) **is the administration of current assets in the name of cash, marketable securities, receivables and inventories (Van Horne (1977). This study based on assessing the impact of each component of WCM on SMEs profitability, the components of WCM are average collection period (ACP), Average payment period (APP), Inventory conversion period (ICP) and Cash conversion cycle (CCC). As stated by Lazaridis and Tryfonidis (2006), Mansoori and Muhammad (2012) and Mathuva (2010), Average collection period is inversely proportional to profitability, this implies that**

if average collection period comparatively decreases over a period of time it enables higher turnover in sales and increase in profitability. And according to Charitou et.al. (2010), Nazir and Afza (2009), Mohammad and Saad (2010) and Deloof (2003), inventory conversion period is inversely proportional to profitability i.e. when inventory conversion period relatively decreases over a period of time it enables higher turnover in sales and increase in profitability. On the other hand Padachi (2006) and Nwaeze et.al. (2006) argued that average payment period and cash conversion cycle are inversely proportional to profitability, which implies that when average payment period and cash conversion cycle decrease the profitability of a firm increases and the vice versa is true.

2.2 Empirical Literature Review

Management of working capital was found to have a significant impact on profitability in studies from different countries

Raheman and Nasr (2007) studied the effect of different variables of working capital management including average collection period, inventory turnover in days, average payment period, cash conversion cycle, and current ratio on the net operating profitability of Pakistani firms. They selected a sample of 94 Pakistani firms listed on Karachi Stock Exchange for a period of six years from 1999 - 2004 and found a strong negative relationship between variables of working capital management and profitability of the firm. They found that as the cash conversion cycle increases, it leads to decreasing profitability of the firm and managers can create a positive value for the shareholders by reducing the cash conversion cycle to a possible minimum level.

Mathuva (2010) examined the influence of working capital management components on corporate profitability by using a sample of 30 firms listed on the Nairobi Stock Exchange (NSE) for the periods 1993 to 2008. He used Pearson and Spearman's

correlations, the pooled ordinary least square (OLS), and the fixed effects regression models to conduct data analysis. The key findings of his study were that: i) there exists a highly significant negative relationship between the time it takes for firms to collect cash from their customers (accounts collection period) and profitability, ii) there exists a highly significant positive relationship between the period taken to convert inventories into sales (the inventory conversion period) and profitability, and iii) there exists a highly significant positive relationship between the time it takes the firm to pay its creditors (average payment period) and profitability.

Shin and Soenen (1998) researched the relationship between working capital management and value creation for shareholders. In their study, Shin and Soenen (1998) used net-trade cycle (NTC) as a measure of working capital management. NTC is basically equal to the cash conversion cycle (CCC) where all three components are expressed as a percentage of sales. NTC may be a proxy for additional working capital needs as a function of the projected sales growth. They examined this relationship by using correlation and regression analysis, by industry, and working capital intensity. Using a COMPUSTAT sample of 58,985 firm years covering the period 1975-1994, they found a strong negative relationship between the length of the firm's net-trade cycle and its profitability. Based on the findings, they suggested that one possible way to create shareholder value was to reduce firm's NTC.

To test the relationship between working capital management and corporate profitability, Deloof (2003) used a sample of 1,009 large Belgian non-financial firms for a period of 1992-1996. By using correlation and regression tests, he found significant negative relationship between gross operating income and the number of

days accounts receivable and inventories of Belgian firms. Based on the study results, he suggested that managers can increase corporate profitability by reducing the number of day's accounts receivable and inventories.

Garcia-Teruel and Martinez-Solano (2007) collected a panel of 8,872 small to medium-sized enterprises (SMEs) from Spain covering the period 1996 - 2002. They tested the effects of working capital management on SME profitability using the panel data methodology. The results, which were robust to the presence of endogeneity, demonstrated that managers could create value by reducing their inventories and the number of days for which their accounts are outstanding. Moreover, shortening the cash conversion cycle also improves the firm's profitability.

Falope and Ajilore (2009) used a sample of 50 Nigerian quoted non-financial firms for the period 1996-2005. Their study utilized panel data econometrics in a pooled regression, where time-series and cross-sectional observations were combined and estimated. They found a significant negative relationship between net operating profitability and the average collection period, inventory turnover in days, average payment period and cash conversion cycle for a sample of fifty Nigerian firms listed on the Nigerian Stock Exchange. Furthermore, they found no significant variations in the effects of working capital management between large and small firms.

The results from above studies show that average collection period, inventory conversion period and cash conversion cycle have negative relationship with profitability, which means when these three variables increase the profitability decreases and vice versa. These studies have created a base for this paper where the study has been done to test relationship between the three independent variables and the dependent variable (Profitability) among Tanzanian SMEs. On the other hand the reviewed studies

have shown conflicting results on the relationship between average payment period and profitability. While Mathuva (2010) found positive relationship between average payment period and profitability, Falope and Ajirole (2009) and Garcia-Teruel and Martinez-Solano (2007) found negative relationship. This has motivated the author of this paper to study on the impact of elements of working capital on SMEs profitability in Tanzania.

3.0 Methodology
The study was done through a sample of 38 SMEs from two prime regions of Tanzania. It consisted 18 SMEs from Morogoro and 28 SMEs from Dar Es Salaam. Data was obtained from the financial statements of the selected SMEs for a period of five years from 31st March 2006 to March 2011. Apart from annual reports, required relevant data is sourced from websites.

3.1 Key Research Variables
The key variables used in identifying the impact of receivables and payables management on profitability of SMEs of Tanzania include average collection period, average payment period, gross operating profit, current ratio, firm size and financial debt ratio. The independent variables are average collection period and average payment period and dependent variable is gross operating profit. The remaining are control variables. The type, expected coefficient sign and rationale or relationship between dependent and independent and control variables are shown in the following table followed by explanation of relationships

Table 3.1: Key variables and the expected impact on Gross Operating Profit (GOP)

Variable	Type	Expected coefficient sign	Rationale
Average collection period (ACP)	Independent variable	Negative	ACP↑⇒GOP↓
Inventory conversion period (ICP)	Independent variable	Negative	ICP↑⇒GOP↓
Cash conversion cycle (CCC)	Independent variable	Negative	ICP↑⇒GOP↓
Average payment period (APP)	Independent variable	positive	APP↑⇒ GOP ↑
The current ratio (CR)	Control variable	Positive	CR ↑⇒ GOP ↑
Firm size (FS)	Control variable	Positive	FS ↑⇒ GOP ↑
Financial Debt Ratio (FDR)	Control variable	Positive	FDR↑⇒GOP ↑

Independent variable

An independent variable is the variable which the researcher has control over, what he/she can choose and manipulate (Leroy 2011). It is usually what the researcher think will affect the dependent variable. In some cases, the researcher may not be able to manipulate the independent variable. It may be something that is already there and is fixed, something he/she would like to evaluate with respect to how it affects something else, the dependent variable. In this study the independent variables are the Average collection period (ACP), Inventory conversion period (ICP), Cash conversion cycle (CCC) and Average payment period (APP)

Dependent variable

A dependent variable is what the researcher measures in the experiment and what is affected during the experiment (Leroy 2011). It is dependent because it "depends" on the variations in independent variable. In this study the gross operating profit ratio (GOP) is used as the measure of Profitability of the firm and therefore it is the dependent variable in the study. The reason for using this variable is because the study aimed to associate the company's operating 'success' or 'failure' with an operating ratio and relate this variable with other operating variables .

Control variables

A control variable is the variable that is held constant in order to assess or clarify the relationship between two variables (Trimpe 2003). A control variable is not the independent variable in an experiment but it may affect the outcome of an experiment. It refers to the variable that is fixed or eliminated in order to clearly identify the relationship between an independent variable and a dependent variable. In this study the control variables were; the current ratio (CR), financial debt ratio (FDR) and Firm size (FS).

3.2 Variable Measurements

The following below are the measures pertaining Inventory management and SMEs profitability:

No. of Days A/R = (Accounts Receivables/Sales) x 365

No. of Days A/P = (Accounts Payables/Cost of Goods Sold) x 365

No. of Days Inventory = (Inventory/Cost of Goods Sold) x 365

Cash Conversion Cycle = (No. of Days A/R + No. of Days Inventory) – No. of Days A/P

Firm Size = Natural Logarithm of Sales

Financial Debt Ratio = (Short-Term Loans + Long-Term Loans)/Total Assets

Current Ratio = Current Assets/Current liabilities

GOP = (Sales - Cost of Goods Sold) / (Total Assets - Financial Assets)

3.3 Estimation Technique (Regression Analysis)

Regression model is used to predict one variable (dependent variable) from one or more other variables (independent variables). In this part the researcher presented the empirical findings on the relationship between average collection period, inventory conversion period, cash conversion cycle and average payment period on one hand and profitability of the Tanzanian SMEs on the other hand. To investigate the impact of average collection period, inventory conversion period, cash conversion cycle and average payment period on profitability, the four models used for the regressions analysis are expressed generally as

1. GOP = f (ACP, CR, FS, FDR,)
2. GOP = f (ACP, CR, FS, FDR,)
3. GOP = f (ICP, CR, FS, FDR,)
4. GOP = f (CCC, CR, FS, FDR,)

Regression Model one

ACP – Average collection period influences the GOP in a negative way i.e. as the number of days increases, the GOP decreases and the vice versa is true. In this model the ACP coefficient was negative (-ve)

$$GOP = \alpha_0 + \alpha_1 CR_{it} + \alpha_2 FS_{it} + \alpha_3 FDR_{it} + \alpha_4 ACP_{it}$$

Regression Model two

ICP – Inventory Conversion Period influences the GOP in a negative way i.e. as the number of days in the ICP increases the GOP decreases and the vice versa is true. In this model the coefficient of ICP was negative (-ve)

$$GOP = \alpha_0 + \alpha_1 CR_{it} + \alpha_2 FS_{it} + \alpha_3 FDR_{it} + \alpha_4 ICP_{it}$$

Regression Model three

APP – Average payment period influences the GOP in a positive way i.e. as the number of days increases, the GOP also increases and the vice versa is true. The APP coefficient was positive

$$GOP = \alpha_0 + \alpha_1 CR_{it} + \alpha_2 FS_{it} + \alpha_3 FDR_{it} + \alpha_4 APP$$

Regression model four

CCC – Cash Conversion Cycle influences the GOP in a negative way i.e. as the length of the cash conversion cycle increases the GOP decreases and the vice versa. In this model the coefficient of CCC is negative (-ve)

$$GOP = \alpha_0 + \alpha_1 CR_{it} + \alpha_2 FS_{it} + \alpha_3 FDR_{it} + \alpha_4 CCC_{it}$$

In all the above regression models, the subscript "i" denotes number of observations and the subscript "t" denotes the number of years i.e. 5 years.

α_0, α_1, α_2, and α_3 are regression parameters which stand for the coefficients of the independent variables

α_4 in model one, two, three and four stands for ACP, ICP, APP and CCC respectively

CR is the current ratio

FS is the firm size

FDR is the financial debt ratio

4.0 PRESENTATION OF FINDINGS

The variables were calculated using balance sheet (book) values. The book value was used because the firms did not provide any market value related to the variables that were used in this study. In addition, the measurement of profitability could only be based on income statement values, not on so called market values. The explanatory variables are all firm specific quantities and there is

no way to measure these variables in terms of their market value. And also when market values are considered in such studies, the knowledge of the date for which the market value refers becomes unsolvable challenge. This is rather subjective; hence book values were put into the use. The findings are enumerated from two points of view a) descriptive analysis in terms of mean, standard deviation and correlations and b) applying multiple regressions (OLS).

4.1 Descriptive Analysis

Descriptive analysis shows the mean and standard deviation of the different variables of interest in the study. It also presents the minimum and maximum values of the variables that help in getting a picture about the maximum and minimum values a variable can achieve.

Table 4.1 Descriptive Statistics of Variables (2006-2011).

	N	Range	Minimum	Maximum	Mean	Std. Deviation	Variance
GOP	38	1.38	0.07	1.45	0.6932	0.34529	0.119
ACP	38	232.42	1.18	233.60	65.9274	59.51356	3541.864
ICP	38	337.29	0.00	337.29	124.1339	77.68863	6035.524
APP	38	364.62	0.48	365.10	93.8024	85.46713	7304.630
CCC	38	277.50	3.65	281.15	93.6108	75.00486	5625.730
CR	38	19.45	0.06	19.51	4.6392	6.04419	36.532
FDR	38	2.14	0.00	2.14	0.6163	0.49987	0.250
SIZE	38	6.12	15.94	22.06	19.1642	1.57545	2.482

The following observations can be made from the table which was prepared on the basis five year data from 2006-2011 for 38 SMEs.

The average financial debt ratio is 61.6%

The average current ratio is 4.6

The average size of SMEs recorded the logarithm of sales at 19.16.

The credit period granted by SMEs to their customers ranged at 65.93 days

The average payable period is 93.80 days

Inventory took on an average 124.13 days to be sold.

Firms that were included in the sample had an average of 69.3% gross operating profit.

The average CCC of all was 93.61 days; the maximum ACP recorded was 233.60 days

The minimum ACP recorded was 1.18 days

The maximum ICP recorded was 337.29 days

The minimum ICP was zero days.
The maximum APP recorded was 365.10 days
The minimum APP was 0.48 days
The maximum CCC recorded was 285.15 days while the minimum was 3.65 days

4.2 Correlation between Variables

An attempt is made here to find the relationship between independent variables and dependent variable used in the model given in the methodology chapter so as to know the direction of the impact of components of working capital on the profitability of the SMEs.. For the purpose, Pearson's Coefficient of correlation analysis is applied to find the relationship between the effect of management of independent variables of working capital and gross operating profit (SMEs' profitability). The study analysis and results are presented hereunder objective wise i.e the relationship between ACP and GOP; ICP and GOP; APP and GOP and CCC and GOP.

Relationship between ACP and GOP

As stated in review of literature, if average collection period comparatively decreases over a period of time it enables higher turnover in sales and increase in GOP reflecting effective use of investment made on receivables. Hence the expected relationship should be negative. In addition the relationship between GOP and control variables as well as ACP and control variables is also calculated. This is because change in ACP impacts control

variables like CR.FDR.SIZE. The calculated relationship between these two variables along with control variables is presented in the following table.

Table 4.2 Correlation between ACP, control variables and GOP

	GOP	CR	FDR	SIZE	ACP
GOP	1.000	-0.130	0.294	-0.089	-0.176
CR		1.000	-0.542	0.008	-0.290
FDR			1.000	-0.063	0.281
SIZE				1.000	-0.220
ACP					1.000

From the analysis of the above table the following observations can be made:

The correlation between ACP and GOP is -0.176 which indicates that decrease in ACP results into increase in GOP and vice versa. This it is as per the expected relationship. The correlation between ACP and CR is -0.290, which indicates that decrease in ACP is resulting into increase in CR and vice versa. This it is as per the expected relationship. The correlation between ACP and FDR is 0.281, which indicates that decrease in ACP is resulting into decrease in FDR and vice versa. This it is as per the expected relationship. The correlation between ACP and SIZE is -0.220, which indicates that decrease in ACP is resulting into increase in SIZE and vice versa. This it is as per the expected relationship.

Relationship between ICP and GOP

As stated with other researchers, if inventory conversion period relatively decreases over a period of time it enables higher turnover in sales and increase in GOP reflecting effective use of investment made on inventories. Hence the expected relationship should be negative. In addition the relationship between GOP and control variables as well as ICP and control variables is also calculated. This is because change in ICP impacts control variables like CR.FDR.SIZE. The calculated relationship between these two variables along with control variables is presented in the following table.

Table 4.3 Correlation between ICP, control variables and GOP

	GOP	CR	FDR	SIZE	ICP
GOP	1.000	-0.130	0.294	-0.089	-0.394
CR		1.000	-0.542	0.008	0.048
FDR			1.000	-0.063	-0.080
SIZE				1.000	-0.130
ICP					1.000

From the analysis of the above table the following observations can be made:

The correlation between ICP and GOP is -0.394, this shows that decrease in ICP is resulting into increase in GOP and vice versa. This is as per the expected relationship. The correlation between ICP and CR is 0.048, this shows that decrease in ICP is resulting into decrease in CR and vice versa. This is as per the expected relationship. The correlation between ICP and FDR is -0.080, this indicates that when ICP decreases, the FDR increases and vice

versa. This is unexpected relationship, but it might be implying that the managers have failed to use effectively the resources generated due to decreased ICP in reducing debts. The correlation between ICP and SIZE is -0.130, which indicates that decrease in ICP is resulting into increase in SIZE and vice versa. This is as per the expected relationship.

Relationship between APP and GOP

As stated in review of literature, if average payment period comparatively decreases over a period of time it leads to increase in GOP reflecting effective use of investment made on payables. Hence the expected relationship should be negative. In addition the relationship between GOP and control variables as well as APP and control variables is also calculated. This is because change in APP impacts control variables like CR.FDR.SIZE. The calculated relationship between these two variables along with control variables is presented in the following table.

Table 4.4 Correlation between APP, control variables and GOP

	GOP	CR	FDR	SIZE	APP
GOP	1.000	-0.130	0.294	-0.089	-0.051
CR		1.000	-0.542	0.008	-0.343
FDR			1.000	-0.063	0.336
SIZE				1.000	-0.175
APP					1.000

From the analysis of the above table the following observations can be made:

The correlation between APP and GOP is -0.051 which indicates that decrease in APP is resulting into increase in GOP and vice versa. The correlation between APP and CR is -0.343, which indicates that decrease in APP is resulting into increase in CR and vice versa. The correlation between APP and FDR is 0.336, which indicates that decrease in APP is resulting into decrease in FDR and vice versa. The correlation between APP and SIZE is -0.220, which indicates that decrease in APP is resulting into increase in SIZE and vice versa. All these observations are as per the expected relationship.

Relationship between CCC and GOP
As stated in review of literature, if cash conversion cycle comparatively decreases over a period of time it enables higher turnover in sales and increase in GOP reflecting effective use of investment made on receivables. Hence the expected relationship should be negative. In addition the relationship between GOP and control variables as well as CCC and control variables is also calculated. This is because change in CCC impacts control variables like CR.FDR.SIZE. The calculated relationship between these two variables along with control variables is presented in the following table.

Table 4.5 Correlation between CCC, control variables and GOP

	GOP	CR	FDR	SIZE	CCC
GOP	1.000	-0.130	0.294	-0.089	-0.440
CR		1.000	-0.542	0.008	0.166
FDR			1.000	-0.063	-0.198
SIZE				1.000	-0.120
CCC					1.000

From the analysis of the above table the following observations can be made:

The correlation between CCC and GOP is -0.440 which indicates that decrease in CCC is resulting into increase in GOP and vice versa. This it is as per the expected relationship. The correlation between CCC and CR is 0.166, which indicates that decrease in CCC is resulting into decrease in CR and vice versa. This it is as per the expected relationship. The correlation between CCC and FDR is -0.198, which indicates that increase in CCC is resulting into decrease in FDR and vice versa. This it is as per the expected relationship. The correlation between CCC and SIZE is -0.120, which indicates that decrease in APP is resulting into increase in SIZE and vice versa. This it is as per the expected relationship.

4.3 Multiple Regressions Analysis

In this section, the empirical findings on the relationship between working capital management and profitability of the Tanzanian SMEs were presented. Each of the four components of WCM was treated independently along with the control variables. Four regression models were employed and below are the results obtained

Impact of ACP on GOP

As the other reviewed researchers' findings stated; if average collection period comparatively decreases over a period of time the GOP would increase. Therefore the expected relationship should be negative. The relationship between GOP and control variables as well as ACP and control variables was calculated using multiple regressions. The calculated relationship between these two variables along with control variables is presented in the following table.

Table 4.6 OLS Regression estimates on impact of ACP on GOP
$R^2 = 0.177$, F = 1.769

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Co linearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	1.234	0.716		1.723	0.094		
CR	-1.407E-03	0.011	-0.025	-0.129	0.898	0.682	1.465
FDR	0.249	0.132	0.361	1.894	0.067	0.688	1.453
SIZE	-2.962E-02	0.036	-0.135	-0.833	0.411	0.947	1.056
ACP	-1.824E-03	0.001	-0.314	-1.836	0.075	0.851	1.175

The following observations can be made from the table:

The coefficient of ACP in the regression was -0.314 which implies that an increase in the number of days of accounts receivable by 1 day is associated with a decrease in profitability by 31.4%. In other way round, when the ACP decreases by one day then the profitability increases by 31.4%. The regression coefficient of CR was -0.025, which implies that an increase in CR by 1 is associated with a decrease in profitability by 2.5% and vice versa. However the influence of CR on GOP (profitability) is low. The coefficient of FDR in the regression was 0.361 which implies that an increase in FDR by 1 is associated with an increase in profitability by 36.1%. In other way round, when the FDR decreases by 1 then the profitability decreases by 36.1%

The regression coefficient of SIZE was -0.135, which implies that an increase in SIZE by 1 is associated with a decrease in profitability by 13.5% and vice versa. However this is unexpected relationship which may be a result of management failure in the firms. The VIF ranged from 1.056 to 1.465, starting from SIZE = 1.056, ACP = 1.175, FDR = 1.453 to CR = 1.465. This implied that each variable had some correlations with other independent variables. The tolerance range from 0.682 to 0.987, where CR = 0.682, FDR = 0.688, ACP = 0.851 and SIZE = 0.987. This implies that there was no problem of Multicollinearity. It should be kept in mind that Multicollinearity problem is observed when the tolerance is less than 0.1

The ascertained regression equation is:

$$GOP = 1.23 - 0.135LnS + 0.361FDR - 0.025CR - 0.314ACP$$

In this multiple regressions other tests were used; the R square test (R^2) and the F-test. The R^2 found to be = 0.177, which implies that impact of the independent and control variables included in the model on GOP was weak. The impact of ACP and the control variables included in the model was only 17.7%, the rest 82.3% of the impact on GOP was due to other factors out of the model.

The F – test was 1.769 which indicates that the significance of the model was low. The F – test shows the existence of linear relationship between the independent and dependent variable.

Impact of ICP on GOP
When the researcher used the Inventory conversion period (ICP) as the proxy for working capital management along with control variables the coefficient of the variable ICP was negative. The regression results were as shown in the table below:

Table 4.7 OLS Regression estimates on impact of ICP on GOP
$R^2 = 0.241, F = 2.614$

Model	Unstandardised Coefficients		Standardised Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	1.294	0.681		1.902	0.066		
CR	2.258E-03	0.010	0.040	0.219	0.828	0.705	1.418
FDR	0.191	0.125	0.276	1.523	0.137	0.699	1.431
SIZE	-2.684E-02	0.034	-0.122	-0.798	0.431	0.977	1.024
ICP	-1.732E-03	0.001	-0.390	-2.537	0.016	0.975	1.025

The following observations can be made from the table:
The coefficient of ICP was negative (= -0.390). This implied that when the ICP decreases by 1 day then the profitability increases by 39%. The regression coefficient of CR was 0.040, which implies that an increase in CR by 1 is associated with an increase in profitability by 4% and vice versa. The coefficient of FDR in the regression was 0.276 which implies that an increase in FDR by 1 is associated with an increase in profitability by 27.6%. In other way round, when the FDR decreases by 1 then the profitability decreases by 27.6%.

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The regression coefficient of SIZE was -0.122, which implies that an increase in SIZE by 1 is associated with a decrease in profitability by 12.2% and vice versa. However this is unexpected relationship which may be due to the inefficiency of SMEs resources management. The VIF ranged from 1.024 to 1.431, starting from SIZE = 1.024, ICP = 1.025, CR = 1.418 to FDR = 1.431. This implied that each variable had some correlations with other independent variables. The tolerance range from 0.699 to 0.977, where FDR = 0.699, CR = 0.705, ICP = 0.975 and SIZE = 0.977. This implies that there was no problem of Multicollinearity. It should be kept in mind that Multicollinearity problem is observed when the tolerance is less than 0.1

The regression equation is:
GOP = 1.294 - 0.122LnS + 0.276 FDR + 0.04CR− 0.39ICP
In this multiple regressions other tests were used; the R square test (R^2) and the F-test. The R^2 found to be = 0.241, which implies that impact of the independent and control variables included in the model on GOP was weak. The impact of ICP and the control variables included in the model was only 24.1%, the rest 75.9% of the impact on GOP was due to other factors out of the model

The F – test was 2.614 which indicate that the significance of this model was at least higher in ICP regression than in ACP regression model. The F – test shows the existence of linear relationship between the independent and dependent variable.

Impact of APP on GOP
When the researcher used the Average payment period (APP) as the proxy for working capital management along with control variables the coefficient of the variable APP was negative although its impact on GOP was insignificant. The regression results were as shown in the table below:

Table 4.8 OLS Regression estimates on impact of APP on GOP

$R^2 = 0.121$, F = 1.136

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Co linearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	1.035	0.731		1.417	0.166		
CR	-2.658E-04	0.011	-0.005	-0.023	0.981	0.674	1.484
FDR	0.240	0.137	0.348	1.757	0.088	0.680	1.471
SIZE	-2.182E-02	0.036	-0.100	-0.599	0.553	0.965	1.036
APP	-7.525E-04	0.001	-0.186	-1.037	0.307	0.825	1.212

The following observations can be made from the table:

The coefficient of APP was negative (-0.186). This implied that when the APP decreases by 1 day then the profitability increases by 18.6%. This is too small to show any notable impact, in other ways it was insignificant. The regression coefficient of CR was -0.005, which implies that an increase in CR by 1 is associated with a decrease in profitability by 0.5% and vice versa. Nevertheless this influence of CR on GOP (profitability) is too low and therefore its impact is almost insignificant. The coefficient of FDR in the regression was 0.348 which implies that an increase in FDR by 1 is associated with an increase in profitability by 34.8%. In other way round, when the FDR decreases by 1 then the profitability decreases by 34.8%.

The regression coefficient of SIZE was -0.1, which implies that an increase in SIZE by 1 is associated with a decrease in profitability by 10% and vice versa. However this is unexpected relationship which may be a result of poor business management. The VIF ranged from 1.036 to 1.484, starting from SIZE = 1.036, APP =

1.212, FDR = 1.471 to CR = 1.484. This implies that each variable had some correlations with other independent variables. The tolerance range from 0.674 to 0.965, where CR = 0.674, FDR = 0.680, APP = 0.825 and SIZE = 0.965. This implies that there was no problem of Multicollinearity.

The regression equation is:

$$GOP = 1.035 + 0.348\ FDR - 0.1LnS - 0.005CR - 0.186APP$$

In this multiple regressions other tests were used; the R square test (R^2) and the F-test. The R^2 found to be = 0.121, which implies that impact of the independent and control variables included in the model on GOP was very poor. APP and the control variables included in the model had impacted the GOP by only 12.1%, the rest 87.9% of the impact on GOP was due to other factors out of the model

The F – test was 1.136 which indicates that the significance of the model was almost negligible. The F – test shows the existence of linear relationship between the independent and dependent variable.

Impact of CCC on GOP (SMEs profitability)

When the researcher used the cash conversion cycle (CCC) as the proxy for working capital management along with control variables the coefficient of the variable CCC was negative. The regression results were as shown in the table below:

Table 4.9 OLS Regression estimates on Impact of CCC on GOP

$R^2 = 0.257$, F = 2.855

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Co linearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	1.276	0.669		1.906	0.065		
CR	4.102E-03	0.010	0.072	0.401	0.691	0.702	1.424
FDR	0.167	0.125	0.242	1.339	0.190	0.689	1.452
SIZE	-2.734E-02	0.033	-0.125	-0.822	0.417	0.977	1.023
CCC	-1.928E-03	0.001	-0.419	-2.704	0.011	0.939	1.065

The following observations can be made from the table:

The coefficient of CCC was negative ($\alpha = -0.419$). This means that when the CCC decreases by 1 day then the profitability increases by 41.9% and on the other hand when CCC increases by one day the profitability decreases by 41.9%. The regression coefficient of CR was -0.072, which implies that an increase in CR by 1 is associated with a decrease in profitability by 7.2% and vice versa. The coefficient of FDR in the regression was 0.242 which implies that an increase in FDR by 1 is associated with an increase in profitability by 24.2%. In other hand, when the FDR decreases by 1 then the profitability decreases by 24.2%. The regression coefficient of SIZE was -0.125, which implies that an increase in SIZE by 1 is associated with a decrease in profitability by 12.5% and vice versa. However this is unexpected relationship which may be a result of poor business management.

The VIF ranged from 1.023 to 1.452, starting from SIZE = 1.023, CCC = 1.065, CR = 1.424 to FDR = 1.452. This implies that each variable had some correlations with other independent variables. The tolerance range from 0.689 to 0.977, where FDR = 0.689, CR

= 0.702, CCC = 0.939 and SIZE = 0.977. This implies that there was no problem of Multicollinearity.

The regression equation is:

GOP = 1.276 + 0.167 FDR–0.027LnS – 0.004CR – 0.002CCC

In this multiple regressions other tests were used; the R square test (R^2) and the F-test. The R^2 found to be = 0.257, which implies that impact of the independent and control variables included in the model on GOP was very poor. APP and the control variables included in the model had impacted the GOP by only 12.1%, the rest 87.9% of the impact on GOP was due to other factors out of the model

The F – test was 2.855 which indicate that this model was significant and implying that there was a linear relationship between the independent and dependent variable.

5.0 Conclusions and Suggestions

Previous researches predicted negative relationship between average days of accounts receivables and SMEs profitability. The results of this research are in line with the previous findings. The findings indicate that average collection period has an inverse relationship with SMEs profitability i.e. when the ACP days increase the profitability of firms decreases and vice versa. These results complied with those from studies by Raheman and Nasr (2007), Deloof (2003), Garcia-Teruel and Martinez-Solano (2007) and Falope and Ajilore (2009) who found negative relationship between ACP and profitability of firms.

The researcher found negative relationship between ICP and GOP (profitability). The results comply with other studies done by Raheman and Nasr (2007), Deloof (2003), Garcia-Teruel and Martinez-Solano (2007) and Falope and Ajilore (2009) who found the negative relationship between ICP and profitability.

On the other hand the coefficient for accounts payable days was negative, it confirmed the negative correlation between SMEs profitability (GOP) and the number of days accounts payable (APP). This implies that less profitable firms take longer to settle payment to creditors. So when profitability falls, less cash is generated from operations and SMEs choose to postpone payments to creditors for survival. The results comply with the studies done by Falope and Ajilore (2009) and Raheman and Nasr (2007) who found negative relationship between APP and Profitability.

Previous theoretical researches predicted negative relationship between cash conversion cycle and SMEs profitability. In the regression model (4) it was found that; CCC had a negative relationship with GOP (profitability) which implies that profitability decreases with the cash conversion cycle. This means that SMEs owner-managers can increase profits by shortening their cash conversion cycle. The results comply with the studies' results done by Raheman and Nasr (2007), Shin and Soenen (1998), Garcia-Teruel and Martinez-Solano (2007) and Falope and Ajilore (2009)

Finally the firm size, current ratio and financial debt ratio are the variables which appear in all four regression model as control variables. In all four regression models it was found that, the firms' profitability as measured by GOP has a positive relationship with financial debt ratio. This implied that profitability increases with increase in financial debt ratio. Furthermore in this study the impact of firm size and current ratio on the GOP was insignificant i.e. size and CR had no reasonable and notable impact on the profitability.

Suggestions for improvement:

The lack of knowledge in financial management to the owner managers of SMEs, which was endorsed by many studies, is yet to be addressed by the government

Too much resource tied up in Inventories and receivables consequently failing to pay suppliers and other related commitments.

Proper financial management education and training facility initiated by government and financing bodies may help them to address the problem of inventory management.

The managements should concentrate on reducing the present ICP of more than 4 months and ACP of about 2 months so as to improve the financial performance.

6.0 Scope for further Research
Future research should investigate generalization of the findings beyond the Tanzanian SMEs. The scope of further research may be extended to the working capital components management including cash, marketable securities, receivables, and inventory management and to the different sectors such as Manufacturing, trading, service and agriculture. Further more the scope should be extended to industries like food processing, milling, poultry and even farming just to mention some of them

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